

THE ZODIAC.



DEVOTED TO SCIENCE, LITERATURE AND THE ARTS.

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No. 2.

(For the Zodiac.)

TO THE CACTUS SPECIOSISSIMUS.

Who hung thy beauty on such rugged stalk
Thou glorious flower? Who pour'd the richest hues
In varying radiance o'er thine ample brow,
And like a mesh, those tissue'd stamens laid
Upon thy crimson lip?

Thou glorious flower!
Methinks it were no sin to worship thee,
Such passport hast thou from thy Maker's hand
To thrill the soul. Lone on thy leafless stem,
Thou bidd'st the queenly rose, with all her buds,
Do homage—and the green-house peerage bow
Their rain-bow coronets.

Hast thou no thought,
No intellectual life,—thou who canst wake
Man's heart to such communings? No sweet word
With which to answer him?—'T would almost seem
That so much beauty needs must have a soul,—
And that the form which tints the gazer's dream
Hath loftier spirit than the common clod
On which we tread.

But while we muse, a blight
Steals sadly o'er thee,—and thy bosom shows
The withering symptoms of a last disease.—
I will not stay to see thy beauties fade.—
—Still must I bear away within my heart,
Thy lesson of our own mortality.—
The fearful fading of each blossom'd bough
On which we lean,—of every wreath that crowns
The fairest brow,—of every bud we vain
Would fold within our bosoms, from the search
Of the destroyer.—

So instruct us, Lord—
Great Father of the sunbeam and the soul,—
Even by this simple sermon of a flower
To cling to Thee.— L. H. S.
Hartford, July 11th, 1836.

TO THE LADY L. S.

Bright star of beauty, on whose eye-lids sit,
A thousand nymph-like and enamored graces,
The goddesses of memory and wit,
Which in due order take their several places,
In whose deere bosom, sweet delicious loue,
Lays down his quiver, that he once did beare,
Since he that blessed Paradise did prone,
Forsooke his mother's lap to sport him there—
Let others strive to entertain with words,
My soule is of another temper made:
I hold it vile that vulgar wit affords,
Denouring time my faith shall not invade:
Still let my praise be honored thus by you,
Be you most worthy, whilst I be most true.
[Drayton.]



AUGUST.

"More hot it grows; ye fervours of the sky
Attend the Virgin—lo! she comes to hail
Your sultry radiance. Now the god of day
Meets her chaste star—be present zephyr's gale
To fan her bosom—let the breezes fly
On silver pinions to salute his ray:
Bride of his soft desires, with comely grace
He clasps the virgin to his warm embrace."

The mean temperature of the month at Albany, as deduced from the observations of twenty years, is 70° 687. The highest observed temperature was 94°, and the lowest 41°, giving the extreme monthly range 53°.—The average amount of rain falling during the month, is 3.327 inches.

ELEMENTS OF METEOROLOGY.

BY M. POUILLET,

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CHAPTER I.

OF TERRESTRIAL HEAT.

As the different degrees of heat or cold exert, an influence more or less direct, over the greater portion of meteorological phenomena, we shall first examine the grand problem of the distribution of heat in the bosom of the earth, and of the atmosphere. To solve this problem, we require not merely transient observations made at isolated points upon the globe, but we require long continued observations, made with good instruments, in all the different climates. Now, we are far from possessing these essential elements; the greater portion of ancient observations were made almost at hazard,

and with little precision: the meteorology of heat in reality, dates only from the commencement of the present age: since then, the immense labors of Humboldt, and the profound theoretical researches of Messrs. Fourier and Laplace have powerfully contributed to establish its extent and true direction; good stationary observations have multiplied, numerous scientific voyages have been made to high mountains, over distant seas, and to countries previously unknown to science. The results which have been collected in the short space of the last thirty years, already form a vast collection, and if they are still incomplete in number and in the time they embrace, they may be said to lead to many great questions upon the thermometrical state of the globe, which may now be discussed from precise data.

These questions will be examined in this chapter, which is divided into sections, under the following titles:

1. Of the temperature of the air at the surface of the earth.
2. Of the temperature at different depths below the surface of the earth.
3. Of the temperature at different heights above the surface of the earth.
4. Of the temperature of large masses of water.
5. Of the equilibrium of the temperature of the earth.

SECTION 1st.—Of the temperature of the air at the surface of the earth.—When it is intended to ascertain the temperature of any place by continuous observations, the greatest attention should be paid to the choice and position of the instruments.

Every thermometer is good, when it is well made, provided it has been graduated from determined points, and provided also that it be tested from time to time, in order to make the necessary corrections for the change of the freezing point. On these conditions, the choice of material is of very small importance; we may employ mercury, alcohol, water, oil, or any other substance capable of undergoing the ordinary changes of temperature without alteration. Nevertheless the size of the instrument and its radiating power should be taken into consideration; a large thermometer may prove inexact

on account of its *insensibility*; for if it requires two or three hours, for instance, to assume the surrounding temperature, it will give false indications of frequent changes; a small thermometer on the contrary, may exhibit faithfully and at every moment the influence to which it is subjected.—A thermometer with great radiating power may prove inexact on account of its *sensibility*; for it is heated and cooled by two causes, the contact of the air and radiation, which then constitutes a noticeable portion of the whole action. Now as we commonly seek the temperature of the mass of free air only, it is evident that we must as far as possible guard against the radiating power of the thermometer and shelter it from any other influence than that of the air whose temperature is sought.

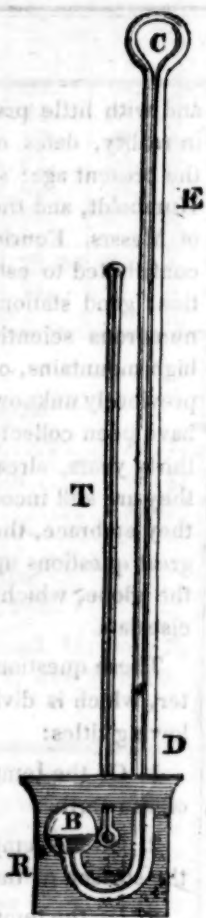
The following is the description of an instrument which I have employed advantageously, to obtain the temperature of the air with exactness, and consequently to estimate the error which may arise from ordinary thermometers.

In an iron vessel, R, filled with mercury, are permanently adjusted, an ordinary thermometer, T, and a differential thermometer, C E D, very carefully graduated. The thermometer T, shows the exact temperature of the ball B, and it only requires an inspection of the position of the summit of the liquid column C E, to enable us to deduce accurately the temperature of the ball C. All that is required, therefore, is, that this ball C, should possess always the temperature of the air, and this is obtained as nearly as possible, by making it very thin and gilding its surface. The indications of this instrument, compared with that of an ordinary thermometer, freely exposed in a suitable place, have led me to the conclusion, that the temperature ascertained by the usual methods, will be found more than a degree and a half from the truth. It may be useful to direct the attention of meteorologists to this subject.

Still we must not expect to arrive immediately at the highest degree of precision. The ordinary methods already present difficulties, enough and the approximations they give are sufficient for the time. We recommend, therefore, their employment to all who may have occasion to employ them for the advancement of science.

The exposure of the instruments is the true basis of exactitude of observation. It must be at once evident, that a thermometer intended to show the temperature of the air, must necessarily be exposed to the north. It is necessary, moreover, that it be sheltered as much as possible from the radiation of neighboring walls, either vertical or inclined, and that the air should envelope and circulate around it freely. To give a more precise idea of these arrangements, we shall describe the thermometer of the Royal Observatory at Paris.

A kind of reel formed by two strong circles of wood, united by transverse pieces, revolves upon



an iron axis, securely fastened to the wall. The scale of the thermometer, which is of glass, forms one of the transverse pieces, and is usually exposed to the exterior; but when it is to be examined, the reel is turned so as to bring the divisions of the scale before the eye of the observer.

This apparatus is exposed directly to the north, and consequently is not acted upon by the sun, except for some hours in the morning and evening, from the vernal to the autumnal equinox, for it is not sheltered.

Formerly, a correct notion was not entertained of the mean temperature: it was thought sufficient to ascertain the highest and lowest temperature of the year, and to take their mean or half sum for the mean of the year; this method was followed by Lahire, Mairan and Maraldi, at the Observatory of Paris—by Celsius at Upsal, &c. Even Reaumur himself adopted it, although aware of its inaccuracy.

Now, we call the mean temperature of a day that which is obtained by adding together the observations made at each instant of it, and by dividing their sum by the number of instants. This definition is purely logical; it defines what is sought, but gives no method of finding it, for it would be physically impossible to observe at every instant. We shall, therefore, explain its meaning by examples. Let us take a second for the interval of time; in a day of 24 hours, there are 86,400 seconds; let us suppose that 86,400 observations are made in a day, from second to second; that they are added together and the sum divided by 86,400, the quotient would be the mean temperature of the day; for thermometrical variations take place so slowly, that the result would assuredly be the same as if the observations had been made every half second or even every 1-100th of a second. But there is no necessity of observing every second, nor every minute. For instance, 24 observations, made from hour to hour, added together and divided by 24, will give the same definitive results as the 86,400 observations, made every second. The whole reduces itself, then, to finding a temperature conformed to the preceding definition, whatever method may be employed in finding it.

Now, numerous experiments show certainly that to obtain the true mean temperature of a day, such as has been defined, we may employ, with nearly equal advantage, the two following methods:

1. To take the mean of three observations, made at sun-rise, at two o'clock, and at sun-set. For instance, on the 17th of January, 1830, the thermometer at Paris, stood,

| | |
|-------------------|------|
| At sun-rise,..... | -0.4 |
| At 2 P. M.,..... | 14. |
| At sun-set,..... | 8.6 |
| | 22.2 |

Of which the third is 7.4, the mean temperature of that day and the minimum of the year.

2. To take the mean of the maximum and minimum temperature of the day. Thus, on the 29th of July, 1830, we had at Paris, for the highest degree of the thermometer,..... 87.8 at $\frac{1}{2}$ past 3. Lowest do. do. 68.9 at 4 A. M.

156.7

Of which the half sum is 78.35, the mean temperature of that day, and the maximum of the year.

This last method is the one employed in the Royal Observatory at Paris, and the maximum and minimum are found by the thermometer previously described; they might, however, be obtained more

conveniently and exactly by a register thermometer.*

The mean temperature of a month is the sum of the mean temperatures of every day in the month, divided by the number of days.

In many registers of observations, the month is divided into three series of ten days each, the mean of each of which is taken first, and then the mean of their sum. Thus for the month of July, 1830, the means of each of these series, at Paris, were,

| | |
|--------------------------------|-------|
| From the 1st to the 10th,..... | 61.34 |
| 11th " 21st,..... | 65.30 |
| 21st " 31st,..... | 71.24 |

207.88

of which the third is 69.29, the mean temperature of that month.

The mean temperature of the year is the sum of the mean temperatures of the 12 months, divided by 12. But it is proper to remark that we obtain the same result, or very nearly, by two other methods:

1st. By simply taking the mean temperature of the month of October:† or,

2d. By taking the mean of the temperatures corresponding to a certain hour in the day, which would be, for Paris, 9 in the morning. The two following tables will give a notion of the exactness obtained by these two approximative methods:

Comparison of the true means and of the means given by the month of October.

| PLACES. | Mean temp. of the year. | Mean temp. of October. | Mean temp. of April. |
|--------------------|-------------------------|------------------------|----------------------|
| Cairo,..... | 72.32 | 72.3 | 77.9 |
| Algiers,..... | 69.98 | 72.1 | 62.6 |
| Natchez,..... | 65.00 | 68.4 | 66.4 |
| Rome,..... | 60.4 | 62.1 | 55.4 |
| Milan,..... | 55.8 | 58.1 | 55.6 |
| Cincinnati,..... | 53.6 | 54.9 | 56.8 |
| Philadelphia,..... | 53.4 | 54.0 | 53.6 |
| New-York,..... | 53.8 | 54.5 | 49.1 |
| Pekin,..... | 54.7 | 55.4 | 57.0 |
| Buda,..... | 51.1 | 52.3 | 49.1 |
| London,..... | 51.8 | 52.3 | 49.8 |
| Paris,..... | 51.1 | 51.3 | 48.2 |
| Geneva,..... | 49.3 | 49.3 | 45.7 |
| Dublin,..... | 48.6 | 48.7 | 45.3 |
| Edinburgh,..... | 47.8 | 48.2 | 46.9 |
| Göttingen,..... | 46.9 | 47.1 | 44.4 |
| Franker,..... | 52.3 | 54.9 | 50.0 |
| Copenhagen,..... | 45.7 | 48.7 | 41.0 |
| Stockholm,..... | 42.3 | 42.4 | 38.5 |
| Christiana,..... | 42.6 | 39.2 | 42.6 |
| Upsal,..... | 41.7 | 43.3 | 39.7 |
| Quebec,..... | 41.9 | 42.8 | 39.6 |
| Petersburgh,..... | 38.8 | 39.0 | 37.0 |
| Abo,..... | 41.4 | 41.0 | 40.8 |
| Drontheim,..... | 39.9 | 39.2 | 34.3 |
| Uleo,..... | 33.1 | 37.9 | 34.2 |
| Umeo,..... | 33.3 | 37.8 | 34.0 |
| North Cape,..... | 32.0 | 32.0 | 30.2 |
| Enontekes,..... | 27.0 | 27.5 | 26.6 |
| Nain,..... | 26.4 | 33.1 | 27.5 |

* In the observations made by different academies in the state of New-York, the mean temperature of the day is found by adding together the morning observations, (taken very shortly after sun-rise,) twice that of 3 and 9 P. M. and that of the next morning, and dividing the sum by 6.—Tr.

† In an article on the mean temperature of the city of Albany, by T. ROMKYN BECK, M. D. published in the Transactions of the Albany Institute, it is remarked that the results obtained at Albany, differ in this respect from the observations of Humboldt, and show that the mean temperature of April approaches nearer to that of the whole year, than the temperature of October. From an examination of the mean temperatures of a considerable number of places on this continent, I am inclined to believe that this is generally the case and that is one of the differences which exist between American and European climates.—Tr.

This table shows that the mean temperature of October is very nearly that of the year, even in very different latitudes: we have also noted the means of the month of April, to show that they are in general, too low to represent the true mean of the year.

Comparison of the true means, and those which would be given by the 9 o'clock observations, at the Observatory of Paris, 1829.

| MONTHS. | Mean temp. of month. | Do. 9 A. M. |
|------------------|----------------------|-------------|
| January, | 28.4 | 27.32 |
| February, | 36.86 | 36.68 |
| March, | 42.26 | 42.08 |
| April, | 49.64 | 51.98 |
| May, | 58.82 | 61.52 |
| June, | 62.78 | 66.38 |
| July, | 65.48 | 66.74 |
| August, | 62.60 | 64.94 |
| September, | 56.66 | 59.00 |
| October, | 50.00 | 49.82 |
| November, | 40.46 | 39.56 |
| December, | 25.70 | 24.62 |
| Means, | 48.30 | 49.22 |

Thus, the mean temperature obtained by the direct method, is $48^{\circ}3$; that of the month of April, $49^{\circ}64$; that of the month of October, 50° , and by the 9 o'clock observation $49^{\circ}22$, which is less than a degree from the true mean; upon which we may remark, that if the observations made at 9 A. M. are good for the mean of the year, they are inexact for the means of the months, being too high for the warm months and too low for the cold ones.

In short, we seek the mean temperature of the year, only to obtain the *mean temperature* of the place, that is, the *mean of all the annual means*. Many years of observation are required to obtain a result which approaches near the truth, and this truth even exists only on one condition: that is, that the changes of temperature to which a place is subject, are changes of oscillation and not of progression. If a climate could be growing in an indefinite manner, progressively warm or cold, we should not attempt to ascertain a continually changing mean temperature. In such a case, we should have to ascertain the law of this increasing or decreasing progression of temperature. It would doubtless be irregular, but it would exist, since every enduring phenomenon is subject to some law. Observations, however, prove that the climates of the earth are stable, and that their vicissitudes are only ranges or oscillations more or less extended. There exists then a mean temperature for each place, and that is a fundamental datum which we must determine. In those climates where the observations of many successive years, give very different results, a great number of years are required to obtain a mean temperature approaching the truth. Should it happen, for instance, that the greatest difference between the means of 20 consecutive years, is as much as 5° , we might infer, with some degree of probability, that the observations of 100 years would give a mean which would still be erroneous by the 5-100th or 1-20th of a degree. On the contrary, if the greatest difference between these means is only 1° , we might infer that the observations of 100 years would give a mean within 1-100th of a degree of the truth. These considerations will be more easily understood, by an example. M. Bouvard gives the following annual means of Paris, for 21 years, from 1806 to 1826, inclusive:—

| | |
|-----------|-------|
| 1806..... | 53.78 |
| 1807..... | 51.44 |
| 1808..... | 50.54 |
| 1809..... | 51.09 |
| 1810..... | 51.08 |
| 1811..... | 53.60 |
| 1812..... | 49.82 |
| 1813..... | 50.36 |
| 1814..... | 49.64 |
| 1815..... | 50.90 |
| 1816..... | 48.92 |
| 1817..... | 50.72 |
| 1818..... | 52.52 |
| 1819..... | 51.98 |
| 1820..... | 49.64 |
| 1821..... | 51.98 |
| 1822..... | 53.78 |
| 1823..... | 50.72 |
| 1824..... | 52.16 |
| 1825..... | 53.06 |
| 1826..... | 52.52 |
| Mean..... | 51.44 |

During these 21 years, the lowest mean is that of 1816—it is $48^{\circ}92$; the highest is that of 1806 and 1822—it is $53^{\circ}78$; their difference, which is the *maximum*, is $4^{\circ}86$; and thus the mean of the 21 years, $51^{\circ}44$, is probably erroneous by $4^{\circ}86$, divided by 21, that is $0^{\circ}231$. If we should admit that all the accidental causes which modify the annual temperatures, were developed in this period of 21 years, and that we had obtained the extreme limits between which the mean temperature oscillates, it would be certain that the observations of 100 years would give the true mean of Paris, with an approximation of $4^{\circ}86$, divided by 100, or .0486 of a degree. But if, in the course of a century, we should find a mean lower than $48^{\circ}92$, or higher than $53^{\circ}78$, it would be evident that the mean of Paris, deduced from these observations, would be more than .0486 from the truth.

Having thus pointed out the simple and precise methods by which we may ascertain the mean temperature of any place, we shall present, in their whole extent, and examine the results which have been obtained hitherto upon a great many points of the globe, and for this purpose we shall follow the great work of Humboldt, published in the third volume of the "Memoires de la Société d'Arcueil." We shall borrow, also, many results published in the other works of this illustrious voyager.

(To be continued.)

(For the Zodiac.)

STANZAS.

BY THE REV. J. H. CLINCH.

I.

There is a charm in solitude,
Which gently soothes the tumult rude
Of Passion and of Care,
Which bids the outer world depart
With all its follies from the heart,
And sends the thought unfettered—free—
On Fancy's glowing wings to flee
Through boundless fields of air;
Till with the treasures of the Past,
The Future or the mighty Vast
Replenished it return,
Filling the soul's interior sight
With glowing images of light—
Visions of beauty—glorious things—
And rich and wild imaginings,
Which live—and breathe—and burn.

II.

The city's busy walks of life,
With soul-absorbing cares are rife,
And eager quest of gain;
Imagination, rendered tame;
Answers to Speculation's name,
And Genius bent to servile ends
Becomes Acuteness, and expends
Its efforts to obtain
Advantage in the public mart,
Where stand at premium, Skill and Art
And Conscience, under par;
Or, if their nobler names they own,
And burst the shackles round them thrown,
Soon must they feel the effort vain
Against the tyrant to maintain
A fierce, unequal war.

III.

Thou, in whose heart are thoughts which burn,
To field and stream and forest turn,
Sweet converse to enjoy
With Nature, in her varied mood,
And with her sister Solitude,
With whom no jarring cares arise,
No anxious fears—no burning sighs
Thy comfort to destroy;
But there by mossy fountain's brink,
Rich draughts of Fancy thou may'st drink,
Unmixed with drop of pain—
Draughts which alone have power to slake
The thirst which fires of Genius wake,
Whose healthy freshness, cool and sweet,
In busy mart and crowded street,
Must still be sought in vain.

ORIGINAL ANECDOTES OF BONAPARTE.

(Continued.)

In all the different accounts of the life and actions of Bonaparte, he never appears greater, more patient and resigned, than from the moment of his landing in the Island of St. Helena.

This barbarous act is generally and justly attributed to the *then* existing ministry of England, and will be forever a dark stain upon the annals of Great Britain and the Prince of Wales, their last king, whose depravity and debaucheries are too well known, even without recording the tragic and sudden death of his unfortunate wife, Queen Caroline.

Well informed persons assure us that the secret instigators of this exile were, Metternich, Talleyrand and Wellington: the same Wellington who afterwards had the fate of the unhappy, brave and skilful Marshal Ney in his hands. Wellington, then all powerful, had but to say a single word to Louis XVIII., and Ney's life would have been saved.—He declined to receive Madame Ney, remained mute, and Ney was condemned! In a strong address to the king of England, signed by thousands of the inhabitants of the city of Manchester, at the time that he was at the head of the ministry, awaiting the arrival of his friend, Sir Robert Peel, from Italy, it was clearly stated, that the Duke of Wellington *was the murderer of Marshal Ney!* It will then not be astonishing to hear that the same man took an active part in the exile of Napoleon.—Wellington also was opposed to abolishing the barbarous punishment of flogging!! The secret cause of Wellington's hatred of Marshal Ney is still generally unknown. It is as follows:—One day the king gave a great dinner at the Tuileries. The fixed hour was six o'clock. Louis, being a great glutton, was punctual to the hour. All the invited guests, ambassadors, marshals, generals, &c., knowing the custom of the king, were assembled alrea-

dy before six, and the king waiting anxiously in his cabinet for the desired hour, was not a little disappointed to hear, when the clock struck six, that all the guests except the Duke of Wellington, had arrived. The political king, who was but the servile prefect of the haughty English commander, ordered dinner not to be served until the arrival of the duke. When this extraordinary order was known, a general whisper of dissatisfaction spread among the numerous guests; and when, after about a quarter of an hour, Wellington arrived, with dusty boots and spurs, and very indecently clad, Marshal Ney said, loud enough to be heard even by him, "that it was very indecent, even impudent, to come in such a negligé (*si indécemment affublé*) to the dinner of the king." Wellington turned quickly towards Ney and said to him in a haughty tone, "he should not forget that he spoke to him in the antichamber of the king!" "That is precisely what I have not forgotten," answered Ney, in the same tone, and measuring him from head to foot, "if not, I would have dusted your boots before you came here." There would have been a scene of an unpleasant nature, if the sang froid of Marshal Macdonald, and some others, had not prevented it; and the following day, at the appointed meeting, the king being informed of what had passed, sent for Marshal Ney, and enjoined him to decline the cartel; and as he refused, as in honor bound, he persuaded Wellington to forget the whole, and not to provoke Ney, who had the whole French army on his side, as it would certainly be the cause of very bloody scenes among the two already embittered parties. Wellington did so, but at the trial of Ney, although frequently urged to speak in favor of this unfortunate man, he refused constantly, and when Madame Ney, all in tears, kneeled before him, imploring his interference, he drily refused her request. This behaviour of Wellington, excited great bitterness against him in Paris, and was much commented on in the higher circles, where it was well known that one single word of his spoken to the king, would have converted the punishment of death into that of exile.

In glancing over the astonishingly rapid career of Napoleon Bonaparte, we find five different persons united in this single individual. As lieutenant of artillery, an exalted Jacobin, he was soon pointed out by the Parisian National Convention, as second in command to the deputy Barras, when in Vendémiaire, some sections of Paris marched against this convention. As general in chief of the army of Italy, he ceased to be an exalted Jacobin, and influenced by the accomplished and humane Josephine, he admitted to his confidence various French noblemen, who had been forced to fly with La Fayette, Latour-Maubourg, Alexander Lamette, &c. As commander of the Egyptian expedition, he united Jacobinism and aristocracy with arts and sciences. As first consul he became a determined republican, affected to be the friend of a constitutional freedom, spread fine proclamations through France, crushed with a strong arm the already overpowerful hydra of anarchy, and established in its place a true military despotism. From this moment, constitutional liberty, so long dreamed of, fled forever from France, which remains in chains until the present moment.

His fifth character predominated from the day of his imperial power, (May 18, 1804.) Since that day all changed in and round him, and he forgot his exalted Jacobinism, his moderate republicanism, his solemn pledged word when named first consul, and became Mr. *l'Etiquette*, as the beautiful and

witty Madame Lasnes used to call him. But throughout these five different changes, he never altered his absolute and iron will. It was when at Fontainebleau that he began to alter; but scarcely had he returned from Elba, when he showed himself again as the master of France.

I shall enter here into some particulars in regard to his *system of administration*, (*mon système d'administrer la France*), as he himself termed it, and give some hitherto unknown particulars of this so extraordinary man, which will be interesting.

As soon as Bonaparte had named himself first consul, he forgot quickly his exalted ultra republicanism, and strove earnestly to procure adherents and friends. He proceeded at first with great precaution, and with a master spirit he tried to rally under his banner the Jacobin and the constitutional, the moderate republican and the ultra royalist. Thus Talleyrand and Fouché were coupled together before his consular car. By degrees he showed a predilection for three distinct classes of people.

In the first class were counted all those born Corsicans, who showed him personally the greatest devotedness and blind obedience; among which the well known dandy ex-ambassador at Constantinople, ex-minister of foreign affairs, and now ambassador of Louis Philippe at London, Gen. Sebastiani, was one of the most conspicuous. In the beginning of his consulate he (Bonaparte) often used to escape from the Tuileries disguised in a big great-coat and a large round hat, so that even the soldiers did not know him, and go early in the morning to Gen. Sebastiani's lodgings, awaken him, and walk arm in arm along the Boulevards. In one of these morning walks, Bonaparte, wishing to make a handsome present to his beloved Josephine, stopped before a large store full of precious curiosities. They found a chambermaid cleaning the store, went in and asked for the master of the house. The servant answered in a dry tone, that there was no master of the house, looked with a suspicious eye upon the two intruders, whom she thought might be a pair of rogues who had entered the store so early, truly with no very favorable exterior, their boots and great coats covered with mud. She ran quickly into a bed-room where two young clerks slept, and awakened them in haste, whilst the two strangers looked upon each other and smiled. One of the young men came hastily and half clothed from his room, and asked their pleasure. Bonaparte's eyes fell upon two large and beautiful transparent vases of an exquisite workmanship, whilst Sebastiani spoke with the clerk, who sent immediately for the mistress of the store, when Bonaparte in his abrupt and peremptory manner, asked the price of these vases; the widow measured him from foot to head and said drily, "that their price was beyond his reach." "This may be, madame," said Bonaparte, irritated, but still in a moderate tone, "but I think it would not cost you much to answer my question." "Ten thousand francs, sir," answered the lady in a dry tone. "Well, madame, is that your lowest fixed price?" "Yes, sir, I have but one price, as every one of my customers knows." "Well, madame, I think I shall buy them; be so good as to place them aside so that nobody else may take them." "But, sir," said the astonished lady, "how then? I shall say they are sold, but—but—" "What but, madame?" said Bonaparte, growing warm. Sebastiani gave him a hint, and said, "madame is right, she does not know us, and of course is not to be blamed for asking at least something by which she might be assured that we were in earn-

est." He handed her at the same moment a bank-note of one thousand francs. The widow, still more astonished, received the note, turned and returned it, and handed it to a clerk, directing him in a whisper to go to a neighbor's and see if it was not a forged one, and then addressing herself to the two strangers, said, with the Parisian gracefulness so characteristic of all these female shopkeepers—"Gentlemen, I ask your pardon; you appear to be fine and well-bred gentlemen, but God knows, since that Corsican has been at the head of our government we are overrun with rogues and vagabonds, who have even attempted to commit forgeries, (which was true) and, therefore, I have sent to my neighbor's, who is an *agent de change* (a broker) and who understands his business well."—"But how then, madame, I thought Bonaparte was a good Frenchman," said the consul, "and although born in Corsica, that he had never ceased to be a Frenchman!" "Yes, yes," answered the merchant, smiling, "he has been a good Frenchman because he was too greatly interested to be otherwise." Sebastiani saw that Bonaparte began to grow warm, and interrupted the loquacious lady in asking her "what she had now to say of the first consul, if he had not crushed anarchy, re-established order, put France in a flourishing state?" "Yes, he has so well re-established order that we have now instead of laws, bayonets—instead of liberty, slavery, and a legion of miserable spies, who denounce and arrest every one who dares to speak against him or his adherents," &c.

This woman was of an exalted character, very handsome and bold, and astonished both by her vehemence and the facility with which she talked to them. Bonaparte could not resist interrupting her in saying, "but, madame, you forget yourself by touching these very delicate political matters, in which you cannot have the least concern, being obliged often to deal with the first consul's friends and adherents; and if we should belong to them, what then madame? Would you not fear to be arrested?" "I fear to be arrested," said she, laughing loud, "you, gentlemen, could you denounce a poor widow who has five little children to provide for?—No, certainly no, I have nothing to fear from you—you appear to be too honest and good gentlemen to wish to ruin a poor woman because she used with freedom the only gift of God her tongue, which the usurper has left her."

On leaving the store Bonaparte told her he would send the money, and for the two vases. In walking out they took a hackney coach, and stopped at a short distance from the Tuileries, in the *rue de l'Echelle*. Bonaparte, although not well treated by this spirited lady, was, nevertheless, the first who said, that he liked her frankness, but that she deserved some good lesson for the future. As soon as he arrived at the Tuileries, he sent Gen. Lasnes with one of his carriages in search of the widow, with a polite invitation to come immediately with him to see the gentlemen who had bought the vases, as they wished to speak with her upon other purchases, and to pay her what they owed. The unsuspecting lady seeing a gentleman clad in citizens clothes, and an elegant, but plain coach, was ready to go, and off they went at full speed. On the road she inquired very anxiously after the names of these gentlemen—if he (Lasnes) was their friend, and many other questions which Lasnes was expressly prohibited from answering. But what was her perplexity when she alighted at the great staircase of the Tuileries, and saw that she had to deal with one of the generals attached to the consul.—

She exclaimed at various intervals, "Oh, mon dieu, mon dieu, what will become of me if these gentlemen should denounce me to the consul."—Lasnes, who although a very rough soldier, was nevertheless humane, and of a good heart, assured her, as well as he could, that not the least harm was intended against her. But what was her terror when the door of the first consul's cabinet opened, and she recognized in him the stranger to whom she had spoken so freely. She was ready to faint, and fell upon her knees and wept bitterly, humbly asking pardon. Bonaparte himself was moved, helped her up, led her to a chair, and requested her to be quiet and composed. These kind words restored her spirits, and she was able to listen to the following friendly words: "Madame, you have been a little imprudent in speaking so freely of me to strangers; happily for you these words have not been heard by Fouché or one of his agents; you would not have come off so easily. Let this be a warning to you for the future. Here is your money, and give this (20,000 francs) to your children, and say to them, that if the mother is not my friend, I wish at least the children might be!" It was by such means that he made himself popular. Compare him now with Louis Philippe and his popularity.

(To be continued.)

A SERIES OF LECTURES ON AMERICAN LITERATURE.

DELIVERED BY REQUEST BEFORE THE YOUNG MEN'S ASSOCIATION, IN THE CITY OF ALBANY, BY S. DE WITT BLOODGOOD.

LECTURE V.—Continued.

A cotemporary of these great men was the astronomer Rittenhouse. He was a native of Pennsylvania. In his youth, his future eminence was shadowed forth, in a singular manner. He had an unconquerable propensity to mark every thing within his reach with mathematical figures. As the youthful painter, in his early life rejoices to cover the walls about him with his charcoal drawings, the presages of his future success, so did this young mathematician delight, in marking upon the field fences, the rocks around his residence in the country, and even upon his plough, the triangles, squares, circles and rhomboids of his favorite study. He soon mastered Newton's Principia, a conquest of no slight value. He also became acquainted with fluxions, of which important science he for a time believed himself the inventor, so limited were his opportunities, but so brilliant was his genius. The delicate state of his health prevented him from continuing his agricultural avocations, and he therefore commenced the business of a clock, watch and mathematical instrument maker, which suited both his taste and his physical strength.

At intervals he amused himself with constructing an Orrery, of very admirable mechanism. It was purchased for the college at Princeton, and is still to be seen there; a second was made for an institution in Philadelphia. During the revolution, if we have been correctly informed, the former was taken to pieces by the enemy, for the purpose of being transported to England as a trophy, but was not carried off. Gen. Washington, by his success at Trenton, caused the sun, moon and planets of Rittenhouse to stand still, and the college retained their possession. A person who had worked with the inventor attempted, on setting it up, to make some alteration in the machinery, but did not succeed, and thus for a number of years, the Orrery had

been quite forgotten. Professor Henry of this city on receiving his late appointment at Princeton, led by his taste to give the machine his attention, conceived the idea of restoring it to its former condition, and has, we understand, succeeded perfectly in his design. The Orrery was so admirably constructed, that it could tell for five thousand years past, as well as for five thousand years to come, the hour of the day, the day of the month and the year of the century, corresponding with the precise situation of the heavenly bodies at any required period. In the history of our literature, as connected with astronomy, the story of this Orrery is worthy of being preserved. From the country Mr. Rittenhouse removed to Philadelphia, where his instruments, although he was a self-taught workman, became so celebrated as to be sought for by even European mathematicians. They have not lost their value even in our own time.

His first written production was a communication to the American Philosophical Society of Philadelphia, containing a calculation of the transit of Venus as about to occur on the 3d of June, 1769. This was a phenomenon of nature, rarely happening, and more rarely observed. The elements of any calculation must of necessity be limited, in comparison with those from data of more frequent occurrence. Only one had taken place for 130 years previous to the year 1769, and but 13 in the preceding 700 years. The next transit of this planet will not again occur until the 8th December, 1874. When Rittenhouse prepared his calculations, only two of these transits had been observed, and these by two Englishmen of the name of Horrox and Crabtree. We mention the circumstances to give some idea of the difficulties in the way of the American astronomer. The phenomenon had attracted the attention of the learned men of Europe. Under the direction of the Royal Society of London, Mr. Banks, afterwards Sir Joseph Banks, Dr. Solander, the pupil of Linnæus, and Mr. Green, assistant at the Greenwich observatory, sailed with Captain Cook to the Society Islands, to make observations there. In their attempt, which succeeded notwithstanding their exposure to innumerable dangers, the English nation seemed to take a deep interest. Thirteen persons were appointed by the American Philosophical Society to make the necessary arrangements. These were subdivided into three committees. Dr. Ewing, whose literary attainments will hereafter receive a passing notice, had charge of the observatory at Philadelphia. Mr. Owen Biddle was stationed at Cape Henlopen, and Mr. Rittenhouse remained at Norristown, where he had a good horizon, and a convenient building for his purpose. The astronomers also possessed the necessary instruments, some of them were specially forwarded from England, so intense was the anxiety of the scientific in that country, that the opportunity for observation should not be lost. We are led, said a distinguished eulogist of Mr. Rittenhouse, to take a view of our philosopher, in his preparations to observe a phenomenon which had never been seen but twice before by any inhabitant of our earth, which would never be seen again by any person then living, and on which depended very important astronomical consequences. We may here mention that the principal object of the observation, was to ascertain the sun's parallax or apparent change of place. No solar day is exactly equal to another, and by the observations made at the transit of Venus or Mercury, astronomers are enabled to verify other calculations, affecting many great principles of astronomy.

We can imagine the anxiety of Rittenhouse, impressed with the importance of the occasion, and the results that would naturally flow from it. His own character, his own accuracy, the interest taken by his friends at home, and by his correspondents abroad, must have excited him to a painful degree at such a moment. What was his happiness to perceive the important day ushered in without a cloud, and a clear and bright horizon, giving him every opportunity to gaze upon the full orb, which was presently to reveal the path of a mighty planet wheeling across its surface. If a good Providence, that watches the sparrow as it falls to the ground, may, without irreverence, be supposed interested in man's pursuit of the strange, the sublime, the wonderful revelations of astronomy, those which the sceptic cannot impeach; if that Almighty ruler of myriad worlds takes interest in those efforts of the mind, which are connected with the study of his matchless wisdom, we may imagine that this cloudless day, this serene sky, this brilliant atmosphere did not all occur by chance.

At the precise moment, when every face was turned towards the Heavens, and each eye gazed in breathlessness at the blazing orb, the contact of the planet took place. Mr. Rittenhouse, in the high excitement of the moment, fainted away! Such is the enthusiasm of genius! This event stamped the reputation of the American philosopher. His observations were every where received with approbation. He was at once enrolled among the first men of the day, and it was said of him by one of the most distinguished of the London Philosophical Society, that no other institution in the world could boast of such a member.

In the month of November following, he also observed the transit of Mercury, of which he published an account. In 1791 he succeeded Dr. Franklin in the presidential chair of the American Philosophical Society, and was himself succeeded by Mr. Jefferson. He was honored with many important political trusts, connected with the subject of boundaries, and the mint of the United States; and the Royal Society of London elected him a member. He died in 1796, at the age of 64, after a short but painful illness, which he bore with christian philosophy. He was not only skilled in astronomy, but in several modern languages, which he doubtless acquired to favor his scientific researches. In private life he was a model, all admitted to be faultless. His communications were numerous, and are to be found in the transactions of the society already mentioned.

Dr. Rush pronounced a well deserved eulogy upon his character, which has perpetuated the remembrance of his greatness. In 1813 his memoirs were published by his relative, William Barton, and those who wish to study the progress of self-taught greatness, may profitably employ some portion of their leisure in contemplating the career of the celebrated Rittenhouse.

We come now to the consideration of another cotemporary. Our only embarrassment is to know how to select most advantageously for our purpose, among the many names which make up the catalogue of American writers. Perhaps there is not on the whole list so eccentric, or so gifted a personage, as Joel Barlow. He was an universal genius, and seemed to possess learning for every theme, and ability for every occasion. He is principally remarkable in his literary career for his Columbiad, which nobody reads, and his poem of Haaty Pudding, which every one reads.

He was born in Connecticut in 1757, and was

educated at Dartmouth and Yale Colleges. In his time, as in ours, it seems to have been the practice among students, to commence their college life in one institution and finish it in another. Mr. Barlow early distinguished himself by his fine talents, and in particular by his skill in poetry. While yet at college the revolution commenced, and he, like many other gallant young men of those days, employed the leisure of his vacations, by joining the ranks of the army, and taking a full share of its fatigues and dangers. He and four brothers fought side by side in many a contested field, and happily for his country he was preserved from the bullets of the enemy to finish his education, and prepare himself for fresh responsibilities. When he graduated in 1778, he delivered a poetical address, which was published in a volume at Litchfield in 1793.

He commenced the study of the law, then at the urgent request of his friends studied theology, and obtained a license to preach as a Congregational Minister. At their solicitation he next accepted the post of chaplain, and again repaired to the army, officiating with distinguished ability in that capacity. He still cultivated literature, and wrote many patriotic poetical addresses, which had their full effect upon the soldiery, as well as his fellow-citizens. He remained with the army through the whole war, but ere he quitted it, delivered in 1781, at New-Haven, upon receiving the degree of master of arts, another poem called the Prospect of Peace.

At the close of the war, finding himself, as he thought, disqualified for the duties of a parish clergyman, he laid aside his gown, and resumed the study of the law. He established himself at New-Haven, and filled up his leisure, by editing a newspaper which he conducted with skill and taste. His desultory pursuits were still farther extended, by the revision of an edition of Watts' Psalms and Hymns, at the instance of the General Association of Connecticut. It was published at Hartford, and contains many original poems from his own pen. It became the authorized version of Connecticut. In 1787 he published the Vision of Columbus, dedicated to Louis 16th, then universally honored as the friend of America, which was received with favor by the public. It was very soon reprinted in London, and in the United States, and an edition was also published in Paris. To enable him to sell the psalm book and his poems, he became a bookseller at Hartford; but this occupation he gave up as he had done the profession of law, to which he did not think himself adequate. While at Hartford he contributed to several literary publications. He next accepted the agency of a land company, of whose character he was totally ignorant. He went abroad to sell lands for them, which they did not own, and he suffered severely by the fraud, in which he innocently had nearly become implicated. In France he was noticed by some of the leading revolutionists, and he joined the party of the Girondists, among whom were the most eloquent and virtuous of the French republicans.

(To be continued.)

SONNETT.

Thine eyes taught me the alphabet of love
To con my cross rowe ere I learn'd to spell,
For I was apt, a scholler like to prove,
Gave me sweet looks when as I learned well,
Vowes were my vowels, when I then beganne
At my first lesson in thy sacred name,
My consonants the next when I had done,
Words consonant and sounding to thy fame:
My liquids then, were liquid chrysell tears,
My cares, my mutes, so mute to crave reliefe,
My dolefull diphthongs were my life's despair,
Redoubling sighes the accent of my griefe:
My loue's scholl mistress now hath taught me so,
That I can read a story of my woe. [Drayton.]

LECTURES ON COMPARATIVE ANATOMY AND ANIMAL PHYSIOLOGY,

BY ROBERT E. GRANT, M. D., F. R. S. E., &c;
Fellow of the Royal College of Physicians of Edinburgh; and Professor of Comparative Anatomy and Animal Physiology in the University of London.

LECTURE IV.

ON THE CLASSIFICATION OF THE ORGANS OF ANIMALS,

And on the Organs of Support in Animalcules and Poriferous Animals.

Before we commence with the first system which enters into the structure of the bodies of animals, I shall merely enumerate to you the order of succession in which we shall consider the whole of the various systems, that we may thus have as exact a method as can conveniently be followed in the study of objects so numerous and diversified; and possess every advantage which is to be derived from method and classification when considering a subject of so vast extent.

The organs of all animals, like the organs of man, have most frequently been divided into three great divisions; the one division comprehending the organs which tend to establish relations between the being itself and surrounding nature; the second division, embracing the means by which the individual is enabled to convert foreign matter into its own likeness; the third division, comprising not the mere relation of the animal to surrounding nature, or treating of its powers of nutrition and maintenance, but its adaptation to the continuance of its race.

The first division comprehends several systems, which you will observe are taken from the most perfect forms of organization; and it is convenient for us to follow as much as possible, a system which will embrace all the most complex as well as the simplest forms. We shall occasionally have to pass over whole tribes of animals in our considerations of the separate systems; and in treating of the whole range of animals, we shall have to omit various groups or genera when speaking of the different forms of organs. We shall find that all animals do not possess a complex machinery, but that the lowest are extremely simple. It would be inconsistent indeed with the nature of the developments we observe in the highest forms of animals, to find that the simplest possess all the same systems, in a similar but minuter condition. It was the opinion, in former times, that the minutest forms of animals contained all the systems of human organization reduced to extremely minute proportions. This opinion was the more plausible from its being observed that there were, indeed, animals of extreme minuteness, which required the microscope to examine their parts, but which yet possessed a nervous and vascular system, with all the more important systems which we find in human organization.

Now the first system which we have to consider among the organs of relation, is that which is destined to support and give form to the body, to protect the soft parts—the organs of support—the osseous system as it is termed when applied to man—to the mammalia, and to the vertebrated classes generally. But we shall find in the invertebrated classes, that the muscular system forms a connexion with parts not contained in the interior of the animal, but most frequently existing outside the body—covering the exterior surface. Under this system, therefore, the osseous—we have to consider the various forms of shells, both of the molluscous classes and the articulated division of the animal kingdom,—the various forms of corals, and the other hard substances met with in the radiated animals, some on the exterior and some in the interior of the body,—all these we shall consider under the division of the *Organs of Support*.

When the skeleton is composed of several parts, we find them connected together by portions of a softer texture, parts more pliable, and denominated in the highest animals "ligaments." This epithet is applied to different parts of the skeletons which are not internal or belonging at all to the vertebrated form. We shall find that in the class *Zoophytes* there are parts (as in the specimens of *Isis* and *Coralline* I now show you) which are solid, and connected with each other by intervening pliable substances. We see an instance of this in the common *Isis hippuris*. We find it even where the

skeleton is external. We also find it in the bivalved molluscous animals. We see it in the articulated animals. The unconsolidated portion of integument serves to unite the different parts of their skeleton. In this class of organs are the active organs of motion, or the muscular system, which we have to examine, whether in the form of fibres or of a homogeneous substance. The organs of sensibility and motility are the nervous system. The organs of sensation are next to be examined—the organs of the senses—the apparatus placed at the extremity of the nerves, and which become less and less developed as we descend to the lower grades of animals,—these requiring less than the more elevated forms. The latter being more easily injured, from their greater degree of complexity, require increased means of protection, and thus have more fully-developed organs of sensation.

The second great system of organs is that of *nutrition*,—a system which is, of course, common to animals and plants; and, indeed, so characteristic is it of the vegetable kingdom, that it has been commonly denominated the system of vegetative life. We see that though plants have not brain, muscles, and bones, yet that they have the means of conveying foreign matter into their own bodies, through inert vessels; that they have a circulating system which is visible, that they have this even in the separate cells; that particles are moving in great rapidity round the interior of those cells; and that they have various other systems by which they are enabled to move and expand their parts, to follow the direction of the sun, and to contract those parts again at the setting of the sun, and that they have organs of respiration in the leaves. And this latter system, containing as it does the organs of nutrition, has been distinguished as especially characteristic of vegetable life.

In this division we shall have to distinguish the organs of *digestion*, the most general organs in the animal kingdom. All other organs we shall find to disappear till we have come to animals without any other organ than a common bag for digesting matter. The next system—the *chyliferous*—will confine us to a very few animals. The organs of *circulation* are much more widely extended through the scale. Here we shall find that fluids at first meander through the body without distinct vessels—that vessels at length are formed, and that a sanguiferous system is completed, by the formation of a heart to convey the blood to the different parts, and particularly in the higher grades, carrying it to the air-cells, when it is acted upon by the function of respiration, which brings the surrounding element more immediately in contact with the blood. Then we consider the organs of *secretion*—the various parts of the glandular apparatus, whether developed at the surface, or in the interior. The organs of *absorption*—the lymphatics, by which the decayed materials are conveyed to the blood to be removed from the body, and the organs of *excretion*, by which they are thrown out, whether by the secretion of urine or otherwise, are next in order. After this the *tegumentary* parts come to be considered, and these we shall find to be curiously connected with the habits of various animals,—that the feathers of birds, and the scales of reptiles, for example, are beautifully adapted to the whole internal systems. The feathers of birds constitute organs of progressive motion of great lightness. They are ordinary appendices, developed hairs, thus increased by the great extent of the respiration, but from their lightness, from their being, as it were, air-tubes of a strong structure, they are the best possible organs for that class of animals. The wings are better for birds than those of the bat would be. You observe also the strong muscles of the organs by means of which they fly. So in animals which swim. But cold-blooded animals do not require to be covered with a bad conductor of caloric, like down or hair. That would be superfluous. They do not incubate. Therefore, simple layers of scales are sufficient both for fishes and reptiles. The living habits of amphibious animals render the absence of hairs and scales best for them. Immersed in water for months together, and in mud, they respire through the surface of their skin. They necessarily respire, when in a state of torpor under water, through the skin.

The last organs to be considered, are those by which the race is continued. The lowest tribes of animals present nothing more than the first element of the generative system, whether you consider all these tribes as females or not, the poriferous and

the polypiferous animals have the means of continuing their species by the detachment of gelatinous parts of their bodies. No impregnation is required, but portions are simply detached which afterwards grow. Other animals are more complex, and require a passage for this ovum. Sometimes a further connexion with the body is formed, a sufficient process to induce the necessary development not having been undergone; and organs of excitement are necessary to enable the animals to complete the function. That addition, of course, exists in those instances in which we find the male and female separate. The male and the female, in all the higher forms of animals, are at first precisely the same, but they assume very different forms as they advance. The clitoris, for instance, shrinks in the one, and develops into a penis in the other. In the organs of impregnation and conception, therefore, we find a great resemblance indeed. Being at first the same, they continue essentially so, with the exception of the higher development of parts in the one case, and the retarded development of them in the other. These are organs for secreting, conveying, and maturing, the seminal fluid or the ovum, comprising also the organs of excitement.

There is a point of consideration which should be mentioned at the present moment. In treating of each of the several systems, I must either proceed from some portion of knowledge which you must be supposed already to possess, that is, from that structural form which is most nearly allied to the human frame (presuming you to have already an acquaintance with the human structure)—we must either proceed from that point as a standard of comparison, and then go progressively downwards through the class of quadrupeds, birds, reptiles, and fishes, to the forms which are more simple, thus gradually diminishing the complexity of the different systems; or we must take the opposite plan, that which nature adopts. Nature begins by simple forms. The animal kingdom itself began by the most simple forms, as is attested by what is found in the earth. Gradually it became more complex. That is attested alike by sacred and profane evidence. It accords with the sacred writings; it agrees with all the best facts drawn from the strata of the earth. Those beings which occur near the surface are of more complex structure, and man, whose remains have yet only been found in the newest strata, is the most complex of all. In the animal kingdom nature begins with the simplest forms: so again with plants. You find a little vesicle to be the nucleus of what is to be formed; but the stem is not commenced in the first instance. All systems of organs begin with their most elementary, their most essential parts, and we could arrive at the most essential parts of a system, either by tracing it downwards in the animal kingdom, or by tracing it backwards in the march of its development in higher animals, as we shall have ample opportunity of seeing in every system that will come under our notice.

Now it is more philosophical to commence with the simplest conditions of the systems, and mount upwards to their more complex forms. It is, perhaps, attended by some difficulties, as it leads the student early to consider forms of animals which are the least known, and to conditions of organization the most remote from the human frame, with which alone we suppose him to be acquainted. By proceeding from the most complex forms, however, we lose the order of development of the various systems, and are constantly restrained in our account of the development of organs; or we must continually suppose a previous knowledge of the simpler forms of animals, which have not been demonstrated. Nature in the formation of organic beings, and in the perfecting of individual organs, does not proceed by lopping off parts, but by superadding to the central element. She gradually superadds to her elements or organs, more and more complex parts. Hence I shall adopt the ascending order in treating of the various systems.

CLASSIFICATION OF THE ORGANS OF ANIMALS.

1. Organs of Relation or of Animal Life.

Organs of support..... Osseous system.
Organs of connexion..... Ligaments.
Organs of motion..... Muscular system.
Org. of sensibility and motility Nervous system.
Org. of sensation..... Org. of the senses.

2. Organs of Nutrition or of Vegetable Life.

Organs of digestion..... Alimentary canal.

Organs of chyfication... Chyliferous system.
Organs of circulation.... Sanguiferous system.
Organs of respiration.... Lungs, branchiæ, cilia.
Organs of secretion..... Glandular organs.
Organs of absorption.... Lymphatic system.
Organs of excretion..... Kidney, skin.
Organs of tegumentation... Tegumentary organs.

3. Organs of Generation.

Organs of impregnation..... Male organs.
Organs of conception..... Female organs.

ORGANS OF RELATION.

1. The Osseous System.

I commence with the organs of relation; and in considering this group of organs, I begin with the osseous system. This is far, however, from being the most important system among the organs of relation. The knowledge of the animal kingdom which we acquire by the study of the osseous system, is important in various points of view. It is important to the geologist, to the anatomist, to the physiologist, and to the naturalist. In tracing this system, we are carried down far in the scale. Were I to take the nervous system in this group of organs, I should not be led so low. By taking the osseous system, however, we are led from very low in the scale to almost all the higher forms of animals, and thus obtain the opportunity of becoming familiar with all the forms which are presented by the animal kingdom, a great advantage to us in commencing this study.

Now considering this system in an abstract point of view, we find it important in all forms of animals where it presents itself as a means of giving attachment to the organs of progressive motion, and as a means of giving protection to the more soft and delicate parts. We find, particularly in the lower animals, innumerable beings which are totally destitute of a skeleton; and from knowing that in the human being there originally is no skeleton, you would expect that to be the case. When all the parts of the human body are soft and gelatinous, there is no earthy skeleton, and often none until a pretty late period, when those parts which are to constitute the solid system have begun to be formed, but not begun to be consolidated by the phosphate of lime. So, in ascending through the skeletons of animals, we find that, originally, the animals are without skeletons. There is no proper skeleton in the entire class of animalcules called *polygastrica*; nor at first is there any in the higher classes, although afterwards they require some solid protecting shield to be thrown over their structure. Again, when we examine the skeleton in the vertebrated classes, we see its gradual development, from the soft and cartilaginous substance which first presents itself in fishes, through all its different stages, until we arrive at man himself. Now in the simplest form of animals—the *polygastric*, though there is no internal solid part which we can consider as a skeleton, nor any secretion of shell on the surface of the body; yet there are parts which we should not altogether omit when speaking of parts that are destined to give support.

You will here perceive that we have to use the term "skeleton" in a very extended sense, in order to embrace all the solid parts of the animals described. Some of the *polygastric* animals exude on their surface a secretion which agglutinates, lays hold of, foreign particles floating in the waters which surround them, and thus form for themselves a partial covering. The earthy matter, however, is not their own produce—is not due to their vital powers, but is an example of what we shall find to be very common in the class of worms which form for themselves an adventitious covering of foreign matter. There are, however, organs of progressive motion in these lower animals, and in which, as in this instance, the surface of the body is covered with minute vibratile cilia. These, you will observe by the magnified drawings before you, are disposed in regular series. Now in carrying the microscope over the surface of these minute *polygastric* animals, we find that they present a striated appearance, as if a network of vessels extended over a great part of their surface; and in some this covering appears extremely like vessels in which a homogeneous fluid is in motion, though no action of the vessels themselves is observable. You have that process going on, as in plants, without any visible active agent resulting from the contraction of fibres, because there is nothing of that kind in them. The striated surface of the *polygastric* ani-

mals gives attachment to the cilia by which they move. These striæ form parts, therefore, which give support to the organs of progression, and may be seen here, in the *trichoda*, and some others. This structure is, however, exceedingly small, when compared with what we find in the *beroe*. In the *beroe*, a magnified figure of which is before you, you will find cilia disposed in eight regular longitudinal series; and in these very minute animals, which are about three quarters of an inch in length, you can see with the naked eye the tough bands on which the cilia are disposed. There is no skeleton composed of earthy matter in the class of *polygastrica*, though their surface is frequently more dense and loricated.

(To be continued.)

BIOGRAPHY OF

Charles Maurice Talleyrand Perigord.

CHAPTER II.

Talleyrand, like the larger part of the young French noblemen at that time, studied very superficially, but showed great natural talents, penetration, sound judgment and wit. In 1767 he obtained the first prize for learning in his class, but was at the same time publicly reprimanded for his glaring irregularities.

His father died when Maurice was about fourteen years old. Having left no fortune and scarcely any provision for his surviving family, he earnestly recommended his children to the kindness of his eldest brother, the Count de Talleyrand Perigord, who received them into his hotel *Rue de l'Université, Faubourg St. Germain*. Before this happened, Maurice, in company with some of his school-fellows, finding himself engaged in a sort of affray or quarrel, with some musketeers of the king's household, was obliged to leap out of the window into the street, to escape brutal treatment from these intoxicated men. The fall being heavy, increased the natural deformity of his foot. Being left upon the spot, from which he could not stir, and found there by a patrol of the armed police, in consequence of his refusal to give his name and place of abode, he was conveyed to the *Hôtel Dieu*, or general hospital for the poorer sort of people, where he remained during the space of four days, neither his friends at school, nor the superior of the college to which he belonged, being able to account for his absence. The lieutenant-general, or chief magistrate of the police, being apprised of the circumstance by his family, took care to suppress the true account of the case, which in those days, was commonly done in respect to young profligates belonging to families of distinction, and had the young man brought back to the college, where he was received in the infirmary of the establishment. All this would have remained a profound secret, but for the indiscretion of one of his accomplices; but when the thing was once known, the scandal was found to be so great on account of the place where it had occurred, that it was unanimously resolved, that the delinquent should be expelled from the institution. From that day Maurice took an insuperable disgust to all theological studies, and preferred resorting to theatres and other places, no longer attending the lectures at the university.

After the death of his father, Maurice, at his uncle's house, was placed under the care of the same governor with his first cousin, Prince de Chalais, a nobleman equally good and loyal. The governor, Fouquet, soon observed that, notwithstanding the brightness of Talleyrand's genius, his most difficult task would be with this pupil. Vicious propensities prematurely discovered themselves in the study, in their walks, at table, and in the drawing room,

but they showed themselves mostly to advantage, mischievous and perverse, the French fashionables called him *un aimable roué*.

In 1789 appeared a pamphlet, printed by *Duchesse*, at Paris, called *la vie Laïque et Ecclésiastique de Monseigneur l'Evêque d'Autun*, which contains many infamous particulars of Talleyrand's early life, the greater part of which is exaggerated and false. It is true that his morality was very lax, but Talleyrand had this in common with the majority of the French noblemen of the time. The pamphlet was written by a passionate *ultra*, who, in publishing it, wished to destroy the already powerful influence of Talleyrand.*

His younger brother, Count Archambault, Duke of Talleyrand, by the creation of Louis XVIII., and his cousin, the young Prince de Chalais, gave great satisfaction to their governor, Mr. Fouquet, but Maurice became profligate, disorderly, and mischievous. His uncle, informed of his debauched life, had at various times warned him in a paternal manner to change his conduct, but in vain; and as Maurice continued his debauches, the Count de Perigord was obliged to assemble at his house a family council, in which it was agreed to procure from the king a *lettre de cachet*. This was easily procured; and in the month of October, 1770, young Talleyrand was apprehended at a gaming house, and conveyed instantly to the Bastille, under the nick-name of the *Abbé Boiteux*, or the lame priest. At the expiration of two months, he was transferred to the state-prison of Vincennes, where he remained in confinement during a whole year.

Notwithstanding young Talleyrand was in solitary confinement, the chaplain of the castle of Vincennes was allowed to pay him occasional visits, and was especially commissioned to administer comfort to him, and make him resume his former studies. In consequence of these arrangements, as soon as the least noise indicated the approach of the chaplain, the prisoner assumed the outward appearance of compunction and deep repentance, always showing himself either employed in study, or having just taken leave of his books. Now and then he was seen weeping bitterly at his own imprudence, which richly merited the treatment he underwent; at others he imposed on himself the most rigorous penance. "His contrition was so true and so heart-felt," he said, "that he wished for the return of freedom, only to make a willing sacrifice of it forever," &c. So many protestations of a sincere return to piety, so many assurances of reform, melted the good chaplain's heart: a conversion so entire and so speedy, seemed, to him at least, the work of internal grace and divine intervention. In this spirit he wrote an elaborate letter to the Count de Perigord, in which he depicted

ed the edifying effect which the regeneration and return to virtue of young Maurice, had produced upon him.

The Count consented to his release, and an order was sent from Versailles, that the gates of his prison should immediately be thrown open; but he was sent to Toulon, in order to finish his studies.

Talleyrand, at the age of eighteen, took, as was the custom at the time with all young noblemen devoted to the ecclesiastical state, the title of the Abbé de Perigord, and it was under that denomination that he accomplished what is called a retreat at the Parisian seminary, or ecclesiastical institution of St. Sulpice, in company with the young Abbé de Clermont Tonnerre, whom we have seen under the restoration, as one of the most violent members of the high clergy, after having been the scandal of his gown by his debaucheries in early life.

A year before the death of Louis XV., Talleyrand was introduced to the presence of Madame Du Barry, the reigning mistress of the day, and was ever after an assiduous visiter at the toilet of that influential woman. He insinuated himself so well into her favor, that he obtained, through her, from the king, two rich benefices, which gave him a yearly income of 24,000 francs.

The young abbé soon became addicted to a profligate life, was one of the most fashionable gallants of his time, and well received in the brilliant circles in Paris. He, at the same time, was never seen angry at any attacks made against him, but replied with so much calm indifference, in so dry and witty a manner, that he had almost always the laughs on his side. This made him entirely the *abbé à la mode*, and his numerous gallantries gave him the title of *le jeune abbé à bonnes fortunes*.—They said of him that he was found *irrésistible* by the *adorable moitié du genre humain*.

Talleyrand was a frequent guest at Madame de Stael's, and the Marquise de Sillery's, (Madame de Genlis,) and a great admirer of Pamela, the adopted daughter of the latter, afterwards Lady Edward Fitzgerald.

Then, as in our times, a rich, witty and bold man, is always more admired than a modest, intellectual, poor and honest man; and the Abbé Talleyrand, in his twenty-sixth year, was, by the influence of his friends and some ladies of high rank, named agent-general of the clergy. As such he reformed many abuses, and exhibited talents of no ordinary character. From this time forward may be dated the public career of Talleyrand, in which he exhibited such an astonishing variety of foresight, cunning, suppleness and skill, as soon attracted towards him the eyes of his friends and the public. Mirabeau, his companion and friend, designated him even at that early period, in his secret correspondence with Berlin, as "one of the most subtle and powerful intellects of the age."

As my aim in writing this biography is not to enter into all these low and scandalous histories, true or fictitious, of his various amours, with which so many pamphlets and memoirs are over-filled, but to give some outlines of his great abilities in negotiations, and his astonishing secret influence over the political events of the past fifty years, I shall only state that his amours were not confined to the higher ranks, but extended indiscriminately through every circle of society, in all of which he was equally successful. This is a *chronique scandaleuse* too mean and despicable for a biographer, and unworthy of record.

(To be continued.)

(For the Zodiac.)

SONG.

Oh, I have loved the bright blue sky,
The ocean and the starlit bay,
But I have deemed thy bright wild eye
More lovely, sweet, by far than they.

Oh, I have loved the blushing rose,
And all the virgin flowers of May,
But on thy cheek a beauty glow
That's lovelier by far than they.

Oh, I have loved the trembling fall
Of silver waters, o'er the hills,
But sweeter is thy voice than all,
And deeper to the soul it thrills.

Oh, I have loved the plaintive notes
Of Philomel in yonder grove,
But on mine ear no music floats
Like the soft sigh of her I love,

FLIGGBERTON.

Albany, August 10, 1836.

[From the London Athenæum.]

ON THE TOTAL DEFECT OF THE QUALITY OF IMAGINATION OBSERVABLE IN THE WORKS OF MODERN BRITISH ARTISTS.

By the author of essays signed "Elia."

HOGARTH excepted, can we produce any one painter within the last fifty years, or since the humour of exhibiting began, that has treated a story *imaginatively*? By this we mean, upon whom his subject has so acted, that it has seemed to direct him, not to be arranged by him: any upon whom its leading or collateral points have impressed themselves so tyrannically, that he dared not treat it otherwise, lest he should falsify a revelation?—any that has imparted to his compositions, not merely so much truth as is enough to convey a story with clearness, but that individualizing property, which should keep the subject so treated distinct in feature from every other subject, however similar, and to common apprehensions almost identical; so as that we might say, this and this part could have found an appropriate place in no other picture in the world but this? Is there anything in modern art—we will not demand that it should be equal—but in any way analogous to what Titian has effected, in that wonderful bringing together of two times in the "Ariadne," in the National Gallery? Precipitous, with his reeling satyr rout about him, re-people and re-illuminating suddenly the waste places, drunk with a new fury beyond the grape, Bacchus, born in fire, fire-like flings himself at the Cretan. This is the time present. With this telling of the story, an artist, and no ordinary one, might remain richly proud. Guido, in his harmonious version of it, saw no further. But from the depths of the imaginative spirit, Titian has recalled past time, and laid it contributory with the present to one simultaneous effect. With the desert all ringing with the mad cymbals of his followers, made lucid with the presence and new offers of a god,—as if unconscious of Bacchus, or but idly casting her eyes as upon some unconcerning pageant—her soul undistracted from Theseus—Ariadne is still pacing the solitary shore, in as much heart-silence, and in almost the same local solitude, with which she awoke at day-break to catch the forlorn last glances of the sail that bore away the Athenian.

Here are two points miraculously co-uniting: fierce society, with the feeling of solitude still absolute, noon-day revelations, with the accidents of the dull-grey dawn unquenched and lingering: the present Bacchus, with the past Ariadne: two stories with double Time, separate and harmonizing. Had the artist made the woman one shade less indifferent to the god: still more had she expressed a rapture at his advent, where would have been the story of the mighty desolation of the heart previous? merged in the insipid accident of a flattering offer met with a welcome acceptance. The broken heart for Theseus was not lightly to be pieced up by a god.

We have before us a fine rough print, from a picture by Raphael in the Vatican. It is the presentation of the new-born Eve to Adam by the Almighty. A fairer mother of mankind we might

* A London publisher, J. Murray, Fleet-street, published, in 1805, an anonymous memoir, in two volumes, 12mo., with the title *Ch. M. Talleyrand de Perigord, containing the particulars of his private and public life, of his intrigues in boudoirs as well as in cabinets*. By the author of the *Revolutionary Plutarch*.—It is the production of a cowardly calumniator, who did well to remain anonymous. After the publication of *La vie Laïque et Ecclésiastique*, &c., there appeared two other scandalous pamphlets: the one *Les miracles Carnales de St. Charles Evêque d'Autun le Patriarche de la Révolution*, Paris, Mercier, 1792; and in the *Chronique Scandaleuse de l'an*, 1774, re-printed in 1793, it is said that Talleyrand was very intimate with Madame Dubarry, the mistress of Louis XV., to whose credit he (Talleyrand) owed his Bishoprick of Autun. They contain some truth, but in general deserve but little credit. Disgusted with their scandalous details I threw them aside; others of the same stamp as *les Intrigues de Ch. M. Talleyrand*, *Cassandre par Danican*, *les Nouvelles à la main*, &c. were so many exaggerated libels as untrue as the London memoirs.

imagine, and a goodlier sire perhaps of men since born. But these are matters subordinate to the conception of the *situation*, displayed in this extraordinary introduction. A tolerable modern artist would have been satisfied with tempering certain raptures of connubial anticipation, with a suitable acknowledgment to the giver of the blessing, in the countenance of the first bridegroom: something like the divided attention of the child (Adam was here a child-man) between the given toy, and the mother who had just blessed it with the *hauble*. This is the obvious, the first-sight view, the superficial. An artist of a higher grade, considering the awful presence they were in, would have taken care to subtract something from the expression of the more human passion, and to heighten the more spiritual one. This would be as much as an exhibition-goer, from the opening of Somerset house to last year's show, has been encouraged to look for. It is obvious to hint at a lower expression, yet in a picture, that for respects of drawing and coloring, might be deemed not wholly inadmissible within those art-fostering walls, in which the raptures should be as ninety-nine, the gratitude as one, or perhaps zero! By neither the one passion nor the other has Raphael expounded the situation of Adam. Singly upon his brow sits the absorbing sense of wonder at the created miracle. The *moment* is seized by the intuitive artist, perhaps not self-conscious, in which neither of the conflicting emotions—a moment how abstracted—have had time to spring up, or to battle for indecorous mastery. We have seen a landscape of a justly admired neoteric, in which he aimed at delineating a fiction, one of the most severely beautiful in antiquity—the gardens of the Hesperides. To do Mr. — justice, he had painted a laudable orchard, with fitting seclusion, and a veritable dragon (of which a Polypheme, by Poussin, is somehow a fac-simile for the situation,) looking over into the world shut out backwards, so that none but a "still-climbing Hercules" could hope to catch a peep at the admired Ternary of Recluses. No conventual porter could keep his keys better than this Custos with the "lidless eyes." He not only sees that none *do* intrude into that privacy, but, as clear as daylight, that none but *Hercules aut Diabolus* by any manner of means can. So far all is well. We have absolute solitude here or nowhere. *Ab extra* the damsels are snug enough. But here the artist's courage seems to have failed him. He began to pity his pretty charge, and, to comfort the irksomeness, has peopled their solitude with a bevy of fair atendants, maids of honor, or ladies of the bed-chamber, according to the approved etiquette at a court of the 19th century: giving to the whole scene the air of a *fête champêtre*, if we will but excuse the absence of the gentlemen. This is well, and Watteauish. But what is become of the solitary mystery—the

Daughters three,

That sing around the golden tree?

Now this is not the way in which Poussin would have treated this subject.

The paintings, or rather the stupendous architectural designs of Martin, have been urged as objections to the theory of our motto. They are of a character we must confess, to stagger it. His towered structures are of the highest order of the material sublime. Whether they were dreams, or transcripts of some older workmanship—Assyrian ruins old—restored by this mighty artist, they satisfy our most stretched and craving conceptions of the glories of the antique world. It is a pity that they were ever peopled. On that side, the imagination of the artist halts, and appears defective.—Let us examine the point of the story in Belshazzar's Feast. We will introduce it by an apposite anecdote.

The court historians of the day record, that at the first dinner given by the late king, (then Prince Regent) at the Pavilion, the following characteristic frolic was played off. The guests were select and admiring: the banquet profuse and admirable: the lights lustrous and oriental, the eye was perfectly dazzled with the display of plate, among which the great gold salt-cellar, brought from the regalia in the tower for this especial purpose, itself a tower! stood conspicuous for its magnitude. And now the Rev. —, the then admired court chaplain, was proceeding with the grace, when, at a signal given, the lights were suddenly overcast, and a huge transparency was discovered, in which glittered in golden letters—

"BRIGHTON—EARTHQUAKE—SWALLOW-UP—ALIVE!"

Imagine the confusion of the guests: the George and Garters, jewels, bracelets, moulded upon the occasion! The fans dropped, and picked up the next morning by the sly court pages! Mrs. Fitz-what's-her-name, fainting, and the Countess of — holding the smelling-bottle, till the good humoured prince caused harmony to be restored by calling in fresh candles, and declaring that the whole was nothing but a pantomime *hoax*, got up by the ingenious Mr. Farley, of Covent Garden, from hints which his royal highness himself had furnished!—Then imagine the infinite applause that followed, the mutual rallyings, the declarations that "they were not much frightened," of the assembled galaxy.

The point of time in the picture exactly answers to the appearance of the transparency in the anecdote. The huddle, the flutter, the bustle, the escape, the alarm, and the mock-alarm: the prettinesses heightened by consternation: the courtier's fear, which was flattery, and the lady's, which was affectation: all that we may conceive to have taken place in a mob of Brighton courtiers, sympathising with the well-acted surprise of their sovereign: all this, and no more, is exhibited by the well-dressed lords and ladies in the Hall of Belus. Just this sort of consternation we have seen among a flock of disquieted wild geese at the report only of a gun having gone off!

But is this vulgar fright, this mere animal anxiety for the preservation of their persons—such as we have witnessed at a theatre, when a slight alarm of fire has been given—an adequate exponent of a supernatural terror? the way in which the finger of God, writing judgments, would have been met by the withered conscience? There is a human fear, and a divine fear. The one is disturbed, restless and bent upon escape. The other is bowed down, effortless, passive. When the spirit appeared before Eliphaz in the visions of the night, and the hair of his flesh stood up, was it in the thoughts of the Temanite to ring the bell of his chamber, or to call up the servants? But let us see in the text what there is to justify all this huddle of vulgar consternation.

From the words of Daniel it appears that Belshazzar had made a great feast to a thousand of his lords, and drank wine before the thousand. The golden and silver vessels are gorgeously enumerated, with the princes, the king's concubines and his wives. Then follows—

"In the same hour came forth fingers of a man's hand, and wrote over against the candlestick upon the plaster of the wall of the king's palace; and the king saw the part of the hand that wrote. Then the king's countenance was changed, and his thoughts troubled him, so that the joints of his loins were loosened, and his knees smote one against another."

This is the plain text. By no hint can it be otherwise inferred, but that the appearance was solely confined to the fancy of Belshazzar, that his single brain was troubled. Not a word is spoken of its being seen by any else there present, not even by the queen herself, who merely undertakes for the interpretation of the phenomenon, as related to her, doubtless, by her husband. The lords are simply said to be astonished: *i. e.* at the trouble and the change of countenance in their sovereign. Even the prophet does not appear to have seen the scroll, which the king saw. He recalls it only, as Joseph did the dream to the king of Egypt: "Then was the part of the hand sent from him, [the Lord,] and this writing was written." He speaks of the phantasm as past.

Then what becomes of this needless multiplication of the miracle? this message to a royal conscience, singly expressed—for it was said, "thy kingdom is divided,"—simultaneously impressed upon the fancies of a thousand courtiers, who were implied in it neither directly nor grammatically?

But admitting the artist's own version of the story, and that the sight was seen also by the thousand courtiers—let it have been visible to all Babylon—as the knees of Belshazzar was shaken, and his countenance troubled, even so would the knees of every man in Babylon have shook, and their countenances, as of an individual man, been troubled: bowed, bent down, so would they have remained, stupor-fixed, with no thought of struggling with that inevitable judgment.

Not all that is optically possible to be seen, is to be shown in every picture. The eye delightedly

dwells upon the brilliant individualities in a "Marriage at Cana," by Veronese, or Titian, to the very texture and color of the wedding garments, the ring glittering upon the bride's fingers, the metal and fashion of the wine pots; for at such seasons there is leisure and luxury to be curious. But in a "day of judgment," or in a "day of lesser horrors, yet divine," as at the impious feast of Belshazzar, the eye should see, as the actual eye of an agent or patient in the immediate scene would see, only in masses and indistinction. Not only the female attire and jewelry exposed to the critical eye of fashion, as minutely as the dresses in a lady's magazine in Mr. Martin's picture—but perhaps the curiosities of anatomical science and individuality of posture in the falling angels and sinners of Michael Angelo, have no business in their great subjects. There was no leisure for them.

(To be continued.)

We now present to our readers a portion of the Tale, to which the committee have awarded the prize of one hundred dollars. The high reputation of its authoress needs no additional praise, and is fully sustained by the present production.

The committee consists of the following distinguished gentlemen:

T. Romeyn Beck, M. D. Principal of the Albany Academy.

Rev. John N. Campbell, D. D. President of Board of Trustees of Albany Female Albany.

Doct. Jonathan Barber, late Prof. of Elocution in Harvard University.

THE RED BOX,

OR,

SCENES AT THE GENERAL WAYNE:

A TALE.

By Miss Leslie.

In one of the most beautiful counties of Pennsylvania, and in the immediate vicinity of the Susquehannah, stood an old fashioned country tavern, known by the designation of the General Wayne. Of its landlord and his family, and of some little incidents that took place within its precincts about forty years ago, it is our purpose to relate a few particulars.

The proprietor of the house and of the fine farm that surrounded it, was by birth a New-Englander; and having served in Washington's army during the whole of the revolutionary war, he was still distinguished by the title of Colonel Brigham. When, on the return of peace, he resumed his original occupation of farming, he concluded to settle on the genial soil of Pennsylvania, and removed thither with his wife, their little daughter, and an adopted child named Oliver, a fine boy whom they boasted of loving equally with their own Fanny; that he was equally indulged admitted not of a doubt.

As Oliver advanced to manhood he took the chief charge of the farm, and Mrs. Brigham with great difficulty prevailed on her husband to set up an inn; partly to give himself more occupation, and partly because his boundless hospitality in entertaining gratuitously all strangers that came into the neighborhood, had become rather too much of a tax.

Accordingly, a range of stalls for horses was erected at a short distance from the house, which was beautified with a new porch, running all along the front, and furnished with green benches. A village artist (who was not only a painter but a glazier also) was employed to contrive a sign, which it was expected would surpass all that had ever been seen in the country; it being neither Buck nor Fox, neither Black Horse, Green Tree, Coonestoga wagon, or any of those every day things.

The painter's ideas were committed to board in the shape of the landlord's old commander, General Anthony Wayne. This effigy was evidently designed for that of a human being, but the artist had begun the upper part on so large a scale that there was little or no room for the body and limbs; the gallant general looking as if crushed down by the weight of his hat and head. He stood upon a narrow strip of verdigris green, with his two heels together, and his toes wonderfully turned out. The facings of his coat, and all his under-clothes were of gold. He wielded in one hand an enormous sword—the other held out a pistol in the act of going off—and he leaned on a cannon from whence issued a flash of scarlet fire, and a cloud of sky-blue smoke.

It is true, that when the sign came home, the colonel made many objections to it, declaring that gold breeches had never been worn in the continental army, and that no man ever stood still leaning on a gun at the moment it was discharged—neither did he think it by any means a good likeness of General Wayne. But Mrs. Brigham reminded her husband that there was no use in telling all this to every body, and that it might suit some people's ideas of General Wayne—adding, that she never saw a sign that *was* a good likeness, except Timothy Grimshaw's White Lion, which looked exactly like himself.

Oliver averred that the artist was certainly a liberal man, and had given them the full worth of their money, for beside the gilding, there was more paint on it than on any sign he had ever seen.

Their neighbor, Tempy Walters, was, however, of opinion that they had been greatly overcharged, for that a man had painted her brother's cellar-door, (which was considerably larger than this sign) for half the money. "To be sure," added Tempy, "there was no gold on the cellar door—but it must have taken twice the paint."

To be brief, the colonel dismissed the case by paying the artist rather more than he asked—telling him, also, that he should be glad to see him at his house whenever he chose to come, and that his visits should not cost him a cent.

There never, perhaps, was a less profitable tavern than the General Wayne. The people of the neighborhood were amazingly sober, and Mrs. Brigham allowed no tipplers to lounge about the bar-room or porch. The charges were so moderate as scarcely to cover the actual cost of the good things which were so profusely lavished on the table, and the family could not relinquish the habit of treating their guests as visitors and friends. Colonel Brigham always found some reason why such and such articles were not worth considering at all, and why such and such people could not afford to pay as well as he could afford to give them food and shelter. On soldiers, of course, he bestowed gratuitous entertainment, and was never more delighted than when he saw them coming. Pedlars and tin-men always took it—and emigrants on their way to the back settlements were invariably told to keep their money to help pay for their land.

But though tavern-keeping did not realize the anticipations of Mrs. Brigham in operating as a check on the hospitality of her husband, still, as she said, it kept him about the house, and prevented him from heating and fatiguing himself in the fields, and from interfering with Oliver in the management of the farm—Oliver always doing best when left to himself. It must be understood that this youth, though virtually a dependant on the

bounty of the Brighams, evinced as free and determined a spirit as if he had been literally "monarch of all he surveyed." He was active, industrious, frank to a fault, brave and generous; and would have fought at any moment in defence of any member of the family; or indeed, for any member of any other family if he conceived them to have been injured.

Between Oliver and Fanny Brigham there was as yet no demonstration of any particular attachment. They had been brought up so much like brother and sister that they seemed not to know when to begin to fall in love. Fanny coquetted with the smart young men in the neighborhood, and Oliver flirted with the pretty girls; not seeming to perceive that Fanny was the prettiest of all. The old people, however, had it very much at heart for a match to take place between the young people, as the best preventive to Oliver "going west," (a thing he sometimes talked of in common with the generality of young farmers,) and therefore they watched closely, and were always fancying that they detected symptoms of real *bona fide* love. If the young people quarrelled, it was better so than that they should feel nothing for each other but mutual indifference. If they appeared indifferent, it was supposed that Fanny was modestly veiling her genuine feelings, and that Oliver was disguising his to try the strength of hers. If they talked and laughed together, they were animated by each other's society. If they were silent they had the matter under serious consideration. If Fanny received with complaisance the civilities of a rural beau, and if Oliver devoted his attentions to a rural belle, it was only to excite each other's jealousy. On one thing, however, the old people were agreed—which was, that it was best not to hurry matters. In this they judged from their own experience, for Mrs. Brigham had lost her first lover (a man that had come to see her every Wednesday and Saturday for five years and a half) because her father prematurely asked him what his intentions were. And Colonel Brigham had been refused no less than nine times in consequence of "popping the question" at his first interview—a way he had when he was young.

So equal, however, was their love for the two children, (as they still continued to call them,) so anxious were they to keep Oliver always with them, and so impossible did it seem to them to think of any other young man as a son-in-law, that they would have sacrificed much to bring about so desirable a conclusion. But we have been loitering too long on the brink of our story, and it is time we were fairly afloat.

One clear mild autumnal evening, Colonel Brigham (who for himself never liked benches) was occupying a few chairs in his front porch, and reading several newspapers; looking occasionally towards a cider-press under a large tree, round which lay a mountain of apples that a horse and a black boy were engaged in grinding. The colonel was habited in striped homespun trowsers, a dark brown waistcoat with silver buttons, and no coat—but he took great pride in always wearing a clean shirt of fine country-made linen. As relics of his former military capacity, he persisted in a three-cocked hat and a black stock. He had joined the army in the meridian of life, and he was now a large, stout, handsome old man, with a clear blue eye, and silver grey hair curling on each side of a broad high forehead. Suddenly a stage, that passed the house twice a week, stopped before the door. The only

passengers in it were an old gentleman, who occupied the back seat, and four young ones that sat on the two others, all with their faces towards him.

"Can we be accommodated at this inn for a few days?" said the elder stranger, looking out at the side. Colonel Brigham replied in the affirmative, adding that just then there were no guests in the house. "So much the better," said the old gentleman, "I like the appearance of this part of the country, and may as well be here for a little while as any where else." And making a sign to the young ones, they all four scrambled out of the stage with such eagerness as nearly to fall over each other—and every one took a part in assisting him down the steps, two holding him by the hands, and two by the elbows. But as soon as his feet touched the ground, he shook them all off as if scattering them to the four winds. He was a small slender old man, but of a florid complexion, and showed no indication of infirm health, but the excessive care that he took of himself—being enveloped in a great coat with a cloak over it, a fur tippet round his neck, and his hat was tied down with a silk handkerchief.

"Sir, you are welcome to the General Wayne," said Colonel Brigham, "though I cannot say much for the sign. That was not the way brave Anthony looked at Stony Point. May I ask the favor of your name?"

The stranger looked at first as if not accustomed to this question, and unwilling to answer it. However, after a pause, he deigned to designate himself as Mr. Culpepper, and slightly mentioned the four young men as his nephews, the Mr. Lambleys. There was a family likeness throughout the brothers. They were all tall and slender—all had the same fawn-colored hair, the same cheeks of a dull pink, the same smiling mouths habitually turned up at the corners, and faces that seemed as if all expression had been subdued out of them, except that their greenish grey eyes had the same earnest intent look, that is generally found in those of dumb people.

Mr. Culpepper was conducted into a parlour, where, (though the evening was far from cold) he expressed his satisfaction at finding a fire. He deposited on the broad mantel-piece a small red morocco box, which he had carried under his arm, and while his nephews (who had all been to see the baggage deposited) were engaged in disrobing him of his extra habiliments, he addressed himself to Colonel Brigham, whom he seemed to regard with particular complaisance.

"Well, landlord," said he, "you are, perhaps, surprised at my stopping here?"

"Not at all," said the Colonel.

"The truth is," pursued Mr. Culpepper, "I am travelling for my health, and therefore I am taking cross-roads, and stopping at out of the way places. For there is no health to be got by staying in cities, and putting up at crowded hotels, and accepting invitations to dinner-parties and tea-parties, or in doing any thing else that is called fashionable."

"Give me your hand, sir," said Colonel Brigham, "you are a man after my own heart."

The four Mr. Lambleys stared at the landlord's temerity, and opened their eyes still wider when they saw it taken perfectly well, and that their uncle actually shook hands with the inn-keeper. This emboldened them to murmur something in chorus about their all disliking fashion.

"And pray," said old Culpepper, "why should you do that? 'Tis just as natural for young people to like folly, as it is for old people to be tired of it."

And I am certain you have never seen so much of fashion as to be surfeited with it already."

The nephews respectfully assented.

It had already come to the knowledge of Mrs. Brigham, (who was busily occupied up stairs in filling with new feathers some pillow-ticks, which Fanny was making) that a party of distinguished strangers had arrived. "Fanny, Fanny," she exclaimed, opening the door of the adjoining room, in which Fanny was seated at her sewing, "there are great people below stairs. Get fixed in a moment, and go down and speak to them. I am glad your father has had sense enough to take them into the front parlour."

"But mother," replied Fanny, "I saw them from the window when they got out of the stage. They are all men people, and I know I shall be ashamed, as they are quite strange to me, and I suppose are very great gentlemen. Won't it suit better for you to go?"

"Don't you see how the feathers are all over me?" said Mrs. Brigham, "it will take me an hour to get them well picked off, and myself washed and dressed. Get fixed at once, and go down and let the strangers see that the women of the house have proper manners. If you think you'll feel better with something in your hands, make some milk punch, and take it into them."

Fanny's habitual neatness precluded any real necessity for an alteration in her dress—but still she thought it expedient to put on a new glossy blue gingham gown, and a clear muslin collar with a nicely pleated frill round it. This dress would have been very well, but that Fanny, in her desire to appear to great advantage, added a long sash of red and green plaid ribbon, and a large white satin bow deposited in the curve of her comb. Then, having turned herself round three or four times before the glass, to ascertain the effect, she descended the stairs, and in the entry met Oliver, who had just come in at the front door, and had seen from the barn-yard the arrival of the guests.

"Fanny," said Oliver, "why have you put on that great white top-knot? It makes you look like one of the cockatoos in the Philadelphia museum. Let me take it off."

"Oh! Oliver, Oliver!" exclaimed Fanny, putting her hands to her head, "how you have spoiled my hair."

"And this long sash streaming out at one side," pursued Oliver, "how ridiculous it looks!" And he dexterously twitched it off, saying, "There, take these fly-traps up stairs—they only disfigure you. I thought so the other day when you wore them at Mary Shortstitch's sewing frolic. You are much better without them."

"But I am *not*," said Fanny, angrily snatching them from his hand, "look how you've crumpled them up! Instead of finding fault with me for wishing to look respectfully to the strangers, you had best go and make yourself fit to be seen."

"I always am fit to be seen," replied Oliver, "and you know very well that I always do put myself in order as soon as I have done my work. But as for dressing up in any remarkable finery on account of four or five strange men, it is not in my line to do so. If, indeed, there were some smart girls along, it would be a different thing; but it is not my way to show too much respect to any man."

"I believe you, indeed," remarked Fanny.

"Well, well," said Oliver, "your hair is pretty enough of itself—and you fix it so nicely that it wants no top-knot to set it off; and this party-co-

lored sash only spoils the look of your waist. I hate to see you make a fool of yourself."

Fanny tossed her head in affected disdain, but she smiled as she ran up stairs to put away the offending ribbons. She found her mother leaning down over the bannisters, and looking very happy at Oliver's desire that Fanny should not make a fool of herself.

Fanny having prepared the milk-punch in the best possible manner, filled half a dozen tumblers with it, grating a profusion of nutmeg over each, and then arranged them on a small waiter. When she entered the parlor with it, Mr. Culpepper, who called himself a confirmed invalid, was engaged in giving her father a particular description of all his various ailments; and the four nephews were listening with an air of intense interest, as if it was the first they had heard of them.

"This is my daughter, Fanny," said Colonel Brigham, and Mr. Culpepper stopped short in his narrative, and his nephews all turned their eyes to look at her. When she handed the milk-punch the old gentleman declined it, alledging that the state of his health did not permit him to taste any sort of liquor. His nephews were going to follow his example, till he said to them peremptorily—

"Take it—there is nothing the matter with any of you. If there is, say so."

The Mr. Lambleys all rose to receive their tumblers, their uncle having made them a sign to that purpose, and Fanny thought herself treated with great respect, and curtesied blushingly, to every one as he sat down his glass.

"From such a Hebe it is difficult to refuse nectar," said the old gentleman, gallantly.

"A Hebe, indeed!" echoed the nephews.

The uncle frowned at them, and they all looked foolish—even more so than usual.

"Now Fanny, my dear," said her father, "you may go out, and send in Oliver."

"Mother," said Fanny, as she joined Mrs. Brigham in the pantry, "I like these strangers quite well. They were very polite indeed—but they called me *Phoebe*—I wonder why?"

When Oliver made his appearance, Colonel Brigham introduced him as "a boy he had raised, and who was just the same as a son to him." Mr. Culpepper surveyed Oliver from head to foot, saying, "Upon my word—a fine-looking youth! Strait—athletic—brown and ruddy—dark hair and eyes—some meaning in his face. See, young men—there's a pattern for you."

The four Mr. Lambleys exchanged looks, and tried in vain to conceal their inclination to laugh.

"Behave yourselves," said the uncle, in a stern voice.

The nephews behaved.

(To be continued.)

(For the Zodiac.)

TO THE DEPARTED.

Art thou gone my sweet, where the myrtle grows
Where the orange gleams in its golden light,
Where the blue rolled heavens on their starry throne,
Smile sweetly on the pale brow of the night.

Spirit,

Ah, no! not there,

But I dwell where thou

No more wilt smile

On my sunless brow.

Dost thou dwell in the voice of the silver flood,

As it murmurs along on its pearly bed?

Or art thou the soul of the trembling breeze,

Or dost thou in moon-land rest thy head?

Spirit,

Ah, no! not there,

In the storm nor the air,

But I slumber in calmness ever,

Where the frown of fate,

Nor the scorn of hate,

Can me from my kindred sever.

Dost thou dwell in the leaves of the holy flowers,

The lilly, the rose, or the violet pale?

Or dost thou breathe on the late low sigh,

When its melody makes young hearts to quail?

Spirit,

Ah, no! not there

Is my sunny lair,

But I sing forth sweet strains of love.

On a seraph's breast

I slumber and rest,

In the happy heavens above.

And when shall Hate, and the idiot Strife,

Be tombed in this loveless world of ours?

Spirit,

When man shall be what he is not now,

And virtues' buds become blooming flowers.

And when shall King Death be borne away

From the land he's destroying—on his bier

And where shall his tomb be, and what his pall,

And who shall weep o'er him one parting tear?

Spirit,

He shall die when the world is burning,

And his tomb shall eternity be;

When orders to chaos reterning,

The black gloom his pall shall be.

And hell alone,

In the bitter tone,

Of madness and despair,

Shall weep for woe,

And the tears that flow,

Shall water his hideous lair.

EXTRACT FROM THE NARRATIVE OF NAPOLEON'S ESCAPE FROM THE ISLAND OF ELBA. BY THE BARON DE CHABOULON.

(Translated from the French.)

On the 26th of February, 1815, at 1 P. M. the guard and officers of Napoleon's household received orders to be prepared for an immediate departure. All was immediately in motion; the grenadiers joyfully resumed those arms which had so long lain idle, and spontaneously swore not to yield them but with their lives. The entire population of the country, and a crowd of women and children assembled on the coast, exhibiting on all sides scenes of the most touching character. The faithful companions of Napoleon's exile were surrounded by them, disputing one with the other for the pleasure of seeing and embracing them once more. The young men of the noblest families in the island solicited as a favor the dangerous honor of associating themselves with the fortunes of Napoleon. Glory, hope and joy beamed in every eye: they knew not where they were to go, but with Napoleon at their head, felt confident of success.

At 8 o'clock in the evening one gun was fired as the signal for departure. Thousands of tender embraces were exchanged on all sides. The French embarked amidst the sounds of martial music, and Napoleon, with his friends, made sail under the oft repeated cries of "Vive l'Empereur."

When embarking, Napoleon is said to have exclaimed, in the words of Caesar, "the die is cast." His demeanor was calm, his countenance serene, and he appeared less occupied by the probable success of his enterprise, than in considering the means to be employed in accomplishing his views.

The eyes of Count Bertrand sparkled with hope and delight: General Drouot was thoughtful and serious, while Cambronne appeared to care little for the future, but nevertheless attended to his duty with unremitting zeal. The old grenadiers once more assumed their martial appearance. The Emperor talked and joked with them incessantly; he pulled their ears, their mustachios, and recalled to their minds the glory they had attained, the dangers they had undergone, and finally excited in their minds the same confidence which animated him.

As may naturally be supposed, we were all extremely anxious to know whither we were bound, but respect forbade our venturing to ask the question. Napoleon, himself, after some time, relieved our suspense by saying to his guard: Grenadiers, we are bound to France—our destination is Paris. At these words, smothered exclamations of "Vive la France," burst from all on board, giving Napoleon an assurance of the inextinguishable love which every Frenchman bears to his country.

An English sloop, commanded by Captain Campbell, seems to have been charged with the surveillance of the island of Elba, as she was cruising continually between Port Ferrajo and Leghorn.—At the period of our embarkation, she was laying at the latter port, and therefore could not create any immediate anxiety, but at the same time several French vessels had been seen in the channel, and the presence of these was the cause of some reasonable apprehension. In the meanwhile, it was hoped the night breeze would favor the progress of our little fleet, and that before day break it would be out of sight. In this hope, however, the fugitives were disappointed, for they had barely doubled the Cape of St. Andrew, island of Elba, when the wind died away, and a perfect calm ensued. At break a day they had only made eighteen miles, and lay between the islands of Capraia and Elba.

Their situation was critical, and the naval officers advised returning to Port Ferrajo; but the Emperor ordered the voyage to be continued, depending, as a last resource, either on taking the French cruiser, or running for the island of Corsica, where he felt assured of meeting with a warm reception.

To facilitate these manœuvres, he ordered all unnecessary articles to be thrown overboard, an order, which was most promptly and cheerfully obeyed.

Towards noon the wind freshened, and at 4 P. M. they had reached the meridian of Leghorn, when a frigate was discovered some fifteen miles to leeward; another was also seen towards the Corsican coast, and a third bearing down upon them before the wind. The last was soon made out to be the brig Zephir, commanded by Captain Andrieux. In this dilemma it was proposed by some to hail her, and shew the tri-colored flag, trusting to her commander's attachment to the Emperor, but Napoleon ordered all his guard to lay aside their caps and conceal themselves between decks, preferring to pass the brig unrecognized if possible, reserving, in case of need, the alternative of inducing him to change his colors. At six in the evening the two brigs met, and their commanders hailed each other.—

Captain Andrieux, of the Zephir, inquired after the Emperor, who replied himself with the speaking trumpet, that he was quite well. Captain Andrieux little suspected the prize which thus escaped from his hands when he lost sight of the Emperor's fleet.

On the 27th and 28th the wind blew quite fresh, and at day light a seventy-four hove in sight which appeared to be going to St. Florent or Sardinia—it

was however seen that she held her way without noticing the brig.

The Emperor had written two proclamations before leaving the island of Elba, one addressed to the French nation, and the other to the army; he wished to have them transcribed. His Secretary and General Bertrand being unable to decypher them, brought them to Napoleon, who, despairing of ever making them out, threw them overboard. He then, after a few moment's reflection, dictated to his Secretary the following proclamation.

(To be continued.)

(For the Zodiac.)

NOTES OF A PEDESTRIAN.

Continued.

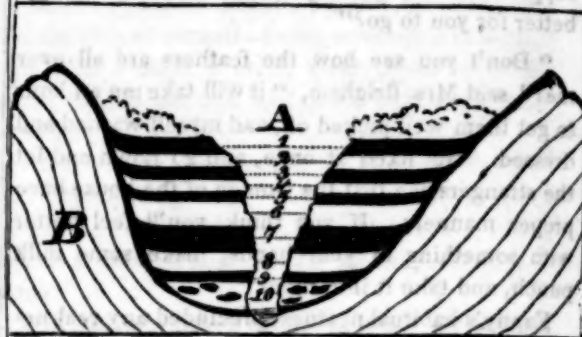
The coal measures, occupying the Lackawanna valley throughout nearly its whole extent, may, with strict propriety, be considered as varying from between two to three hundred feet in thickness, and are composed of numerous strata of anthracite, conglomerate sandstone and shales, in repeated alternations: separated from the millstone grit and shales upon which they rest, by a stratum, consisting principally of nodular clay oxide of iron.—These strata repose one upon the other in a conformable position, stretching across the whole width of the valley, in nearly a horizontal manner, until their terminating edges touch the sloping sides of the mountain ranges which define its limits in that direction.

Their extent, is, from a few miles to the northeastward of the village of Carbondale, to the south westerly extremity of the valley at Pittston, a distance of between twenty-five and thirty miles; but they do not here terminate, for passing in an almost uninterrupted manner, directly into the adjoining valley of Wyoming, they so continue onward to its southern boundaries. Their horizontal position however is not so continuous, for in approaching this latter valley, the strata, particularly along their terminating edges, on either side, become by degrees much contorted, being tilted up in nearly a vertical position, and are elevated to no inconsiderable height upon the sloping surface of the superior gritty stratum of the underlaying rocks, and in some instances, large masses of them have been completely overturned, either by the disrupting power which uplifted these hills, or by the settling of the coal measures after these strata had become perfectly indurated.

The generally horizontal appearance of the strata which constitute these coal measures, their singular contortions, and the elevation of their edges along the mountain ridges, have induced many intelligent individuals, without the necessary scrutinizing investigations, to believe that the anthracite beds of this region are of much greater extent than they really are, that they extend through the centre of the elevated hills, into the neighboring valleys which embrace this useful mineral in such an eminent degree. This is certainly a great mistake, and I venture the assertion, that neither it, nor the bituminous coal, to any considerable amount, exists in any of the strata which compose its loftiest ranges of hills, but is exclusively confined to the coal measures, which are geologically superior to them, although reposing far beneath their summits, in the bosom of the valley. This remark I have ample reasons to believe, will apply, with equal correctness, to some other regions in the state of Pennsylvania, where beds of anthracite are extensively worked for useful purposes.

At the village of Carbondale, near the northern known termination of the "coal fields," as they are generally termed in this region, but three beds of anthracite occur, but in advancing to the southward, two additional ones are disclosed in different situations above them. The order of their arrangement, together with that of the numerous strata with which they alternate, and their relative geological position as regards the strata upon which they directly repose, will be better illustrated by the following section, taken across the valley, through the coal measures near their centre, from the summit of the Moosic mountains on the east, to that of the elevated range which defines their boundaries in the opposite direction.

A geological section of the coal measures in the Lackawanna valley, showing also the manner in which they repose upon the series of millstone grit and shales



A. The Lackawanna river, which in pursuing its course through the centre of the valley until it mingles its waters with those of the Susquehanna, cuts down, through all the various strata which compose the coal measures; to the millstone grit and shales, which underlays them, and exhibits in many places their outcropping edges in a most beautiful manner.

B. The Moosic mountains being wholly composed of the millstone grit and shales, the strata of which bend downward and constitute the immediate floor of the coal measures, then ascending again, in like manner, they form the elevated range of hills on the opposite side of the valley.

No 1. Represents a stratum of anthracite twelve feet in thickness, which first makes its appearance as you approach the lower, or southern portion of the valley, being entirely absent in the more northern parts near Carbondale. The stratum which directly overlays it, could not with sufficient accuracy be determined, in consequence of the vast quantities of alluvial matter, and the dense vegetation with which it is covered; but, judging from the disintegrating fragments which lie scattered so profusely all over the surface of the ground, I should most readily conclude it to be a micaceous sandstone and shales.

No. 2. Is a stratum, varying from twenty to forty feet in thickness, and is composed of layers of micaceous and clay slates, coarse sandstones, and conglomerates. Then follows

No. 3, which is a stratum of anthracite, eight feet in thickness, and is one which has also only been discovered in the southern portion of the Lackawanna valley. Beneath this is

No. 4, which is composed of coarse sandstones, clay and micaceous shales, varying from thirty to fifty feet in thickness. Some of these sandstones are remarkably coarse in their structure. This and all the other strata beneath may readily be detected at Carbondale, near the northern termination of the valley.

No. 5. Is a stratum of anthracite, six feet in

thickness, corresponding in every respect to those above it.

No. 6. Varies from ten to one hundred feet in thickness, and is quite thin at its northern extremity, gradually increasing in its dimensions as it extends towards the south, until it attains its greatest thickness. It is composed of micaceous shales, clay slates, and coarse micaceous sandstones in repeated alternations and although many of the other strata embrace the vegetable organic remains, they in no other situation occur in such profusion, or in so perfect a state of preservation. Some of these relics are of great magnitude, and extend to many feet in length. Those which appeared in the greatest perfection seemed in general to be confined to the layers of sandstone, which reposed immediately upon the thicker stratum of anthracite beneath.—The following is an enumeration of the principal genera to be easily recognized: calamites, spheopteris, cyclopteris, neprorsteris, pectopteris, schizopteris, spheophyllum, lepidodendron, stigmaria, and the annularia.

No. 7. Is a stratum of the most perfect anthracite twenty-three feet in thickness, and the only one worked at present by the Delaware and Hudson Canal Company at Carbondale.

No. 8. Are micaceous sandstone and clay slates, from twelve to fifty feet in thickness, corresponding very nearly to those which constitute the numerous strata already enumerated above.

No. 9. Is the lowest stratum of anthracite belonging to the series at this place, and has a thickness of only one foot. This rests upon

No. 10. Which is a stratum of ten feet in thickness, and one which proves to be the last, or lowest of those which constitute the coal measures at this place. It is composed of clayey sandstone, containing particles of mica, and embracing in prodigious numbers nodules of clay ironstone, of almost every variety of size, much of which will at some future time, I think, be profitably worked for the excellent quality of the iron which they abundantly contain.

Beneath this the stream exposes to view the superior coarse conglomerate of the underlying series of millstone grit and shales, the same as that which has already been described as rising upward and constituting the summits of the neighboring ranges of hills, which enclose the valley on either side.

The only stratum of anthracite worked at present in this valley, by the Delaware and Hudson Canal company, is opened at the village of Carbondale, about midway between the hills. It is designated as No. 7 in the section, and has a general thickness of twenty-three feet, in which nine principal entrances have already been excavated. From each of these entrances an equal number of small railroads branch out in every direction to the various parts of the layer, where the workmen are busily employed in their operations. The whole extent of these roads is at present estimated at about six miles, and it is conjectured that in a short time the company will be under the necessity of extending them to a much greater distance.

The anthracite composing this bed cannot be said to be strictly horizontal in its position, but appears to have been bent, by gentle undulations, into long rolling swells, as they are termed by the engineers and miners of this district. It likewise exhibits an appearance of having once been divided by extensive fissures, into an immense number of large rhombic tables, and so directly north and south is the direction of one of the separating lines which

give to them that form, that the laborers employed in any portion of the mines have not the slightest difficulty in accurately determining, as by a compass, the four cardinal points. This geological phenomenon is not exclusively confined to the various strata of the coal measures, for I have repeatedly had opportunities of observing it, not only in the underlying millstone grit and shales, but also in the series of carboniferous limestones which repose immediately beneath them.

Some parts of this mine, when on a level with the stream, are apt to contain water in considerable quantities, to remove which the company have been at the expense of erecting a series of most admirably constructed pumps, which, whenever necessary, are kept in constant operation by an over-shot wheel, the water for this purpose being supplied by the stream itself. In some other of the openings, however, a single horse power is applied, which proves amply sufficient.

The general belief entertained among the geologists of the present day is, that anthracite and coal have had their origin from vegetables; a supposition which I have a very great inclination to question. The fact of vegetable organic remains, of a tropical character, having always been found accompanying these useful minerals, wherever they occur in any considerable quantities, is by no means a conclusive evidence, to my mind, that they thus originated; for these plants might just as well have grown upon the soil which the strata supported, as our more modern ones do on the surface of a marsh or swamp. If these minerals ever did originate from vegetable substances, the earth at that remote period must have been much more densely covered with them than it is in our present day and generation; for I am well convinced that all the vegetation which now clothes the surface of the globe is totally insufficient to furnish sufficient materials to produce the extensive beds which are embraced in the state of Pennsylvania alone. I can see no reason why anthracite and coal could not have been formed in the state in which it now occurs, as the beds of chalk and various other mineral substances in nature.

The following poem, probably unknown to the greater portion of our readers, we take from one of the early numbers of the Foreign Review, in which we find the following particulars of its author. Jo. Hen. Kellgren was a Swedish author who flourished during the reign of Gustavus III., considered by his countrymen to have been the first of the bright geniuses of his time. He was descended from that honorable class of the community, which constitutes an essential part of the Swedish nation, and has produced so many great and eminent men, the peasantry. He was a philosopher, critic and poet. As a satirist, however, he gained his highest reputation in Sweden, where he has never been equalled in this species of composition. A distinguishing characteristic of his satirical writings, and one which cannot be too highly commended, is the playfulness of the style, and the entire absence of bilious acrimony evinced therein: by which he has effected more than he could possibly have done by a morbid expression of hypochondriacal feeling.

THE FOES OF LIGHT.

En faveur de la Folie
Pardonnez à la Raison.

One eve last Winter—let me see—
It was, if rightly I remember,
About the 20th of December;
Yes—Reader—yes, it so must be,
For Winter's solstice had set in,
And Phœbus—he, the ruler bright

Who governs Poets and the Light,
(his latter shines, the former rhyme
More dimly in the northern clime)—
At three o'clock would seek the deep
For nineteen hours' unbroken sleep.
Lucid on such eve went forth
To join the club upon the north.

A club! political? Herein
No trace the manuscript doth show,
And nothing boots it now to know.
Enough—he went—the club he found,—
Enter'd, sat down, and loo'kd around,
But very little met his sight,
For yet they had not ordered light:
And Heav'n's all glorious President
To rest had long since stole away,
While dim his pale Vice-Regent went
Declining on her cloudy way,
Though thus in darkness, soon he knew
The senseless crowd, who kept a pother
With wondrous heat, (as still they do
Where'er they can't conceive each other)
About the form the chamber bore—
The colour of the chairs—and more.

At length they one and all bethought
Themselves how dull—how worse than nought,
It was to prate of form and hue
While blindness bandaged thus their view;
(For to be blind, and not to see,
The self-same thing appear'd to be;)
So various voices mingling cry
"Light! light!"

Light came—and then the eye
Was glad; for who doth not delight
To see distinctly black from white?
Yet here and there a friend of gloom
Gave light and lamps—you know to whom:
And now of these there's more to come.

A blear-eyed man was first to bawl
Against the light; yet this must call,
Not wonder, pity from each heart,
For how should he enjoy the ray,
When ev'n the smallest gleam of day
Falls on his view with deadly smart?

Like him, in evil plight much pain'd,
An old and nervous man complain'd—
"By Heav'n!" he cried, "this cruel glare
Of light is more than I can bear."
Nor should his murmur much amaze—
The poor old man had all his days
Groped out his path through darksome ways:
But to learn to walk and see
Are both of like necessity,
And custom gives facility.

A drowsy man, with startled stare,
Amazed, leapt high from off his chair;
His name was Dullness.—Ever deep
Both soul and body he would steep,
By day and night, in ceaseless sleep.
One well may fancy what a doom,
For him to be deprived of gloom.
Now all behold his laziness,
The senseless swine can do no less
Than blush to be discover'd, making
The only drone amongst the waking.

Th' Enthusiast cries, "Most sweet to me
The hour when Twilight's veil is drawn;
O blissful twilight! Rapture's dawn!
O darkness mild and soft to see!
While thou dost all in charms array,
What is't to me if thou betray?
In thee may Fancy, fearless, stray,
Released from Reason's rigid thrall,
In joyful chaos mingling all!
Through thee, the shadow substance shows,
Through thee, the Earth empeopled grows.
Gods, giants, wizards, sprites appear!
Just now I caught a shadow here
From Swedenborg's enchanted sphere.
But light—a cursed trick!—now beams,
Consuming all my blissful dreams."

"A cursed trick!" This cry too rose
Loud from behind the corner screen,
From one, whose thriving trade had been
In legerdemain and raree shows.
"The Swedish public soon will see
My art's long hidden mystery:
In twilight all went on divinely,
I trick'd their eyes and purses finely;
But now they've brought this dev'lish light,
Farewell to witchcraft ev'ry way:
Farewell to magic—black and white!"
So said my Lord, and sneak'd away.

Soon as this last lament was o'er,
The self-same exit—through the door—
Was taken by a worthy spark,
Who—honest else we may remark—
Had lately, wandering in the dark,
Mistook—by accident alone—
His neighbor's pocket for his own.

* *Ps. Norr*, on the north side of the town.

A member of the King's police,
Who lov'd his knowledge to increase,
(In vulgar parlance called a spy,)
Now sought the chimney skulkingly.
'Tis hard to listen in the light:
Partly for its still flickering glare,
And partly that, when forced to beat
A swift and unforeseen retreat,
'Twill sometimes with the list'ner fare.
That he must be content to spare
An arm or leg, and leave it there.
With hump before and hump behind,
A cripple had for hours depicted
How dear he was to womankind,
(In darkness none could contradict it,)
And countless blisses called to mind;
But light appear'd, and who look'd down,
If not this miserable clown?
For not a more revolting creature
Ever yet was seen in Nature.
A speaker rose, and said, "Twere vain,
Now that the thing had gone so far,
To strive light's progress to restrain;
Then leave all matters as they are,
So that we can but keep the rays
From spreading to the public gaze.
And to avert this awful scourge
From our dear country, let me urge
'Twere best to leave the light to me
An undisturb'd monopoly."
"Well said!" another answer'd straight,
"Farewell to Ministerial state,
To court, to customs, honor, birth,
And all we value most on earth,
If we allow the light to fall
In common for the eyes of all.
But, now, as Government alone
Has pow'r to say how ev'ry one
May innocently hear and see,
And eat and drink, it seems to me
For my part—and by this is meant
My portion of the public rent—
That we had better fix the light
The Crown's hereditary right."
Of those assembled in the room,
Whom shame constrain'd, in hate's desight
To hide the rage they felt at light,
Mine host and each assistant groom
Were found: for guests could now behold
What drugs were given for their gold.
The miracle, admired of yore,
Of turning water into wine,
Is now a trick, and nothing more,
Which, as all may well divine,
Will hardly cheat the taste and sight
Of sober folks, except at night.
"O sin and shame!" the Parson cries,
"To jeat with Heav'n's providing care;
Think that a child of dust should dare
At eve, when darkness veils the skies,
To strike a light and use his eyes!
Then vainly God prescribes the Sun
His rising and his going down,
In order that the human kind
May needful warmth and radiance find.
Now man creates a warmth by fires,
And with his tallow-light aspires
To ape the blessed beams of day!
Soon Nature will not have a nook,
No soundless depths, nor darksome caves,
Impervious to his searching look,
His skill can curb the winds and waves,
Nay—more tremendous still to say—
He dares, when clouds are torn asunder,
To save his body from the thunder!"
Th' assembly here in laughter burst—
The Priest, preparing to depart,
His brethren most devoutly curst
To pest and death with all his heart;
When suddenly was heard a sound
Of trumpets, drums, and bells around,
And soon a cry in every mouth
Of "Fire is raging in the South!"
The part, the street, the house are nam'd,
And, *Light*, the cause of all, is blam'd:
"O Lucifer's and Genius' sons,
(From *Luc* comes *Lucifer*) see here!"
The Parson cries—"Ye faithless ones,
What direful fruits from Light appear,
Upon the Southern side bursts forth
The fire, and doubt not but the North
Like end will find to crown such crime:
Then let us all resolve in time,
With strictest care to quench outright
Whatever can conduce to light."
Already have the friends of light,
(Such is fanaticism's might,)
Now here, now there, by looks exprest
A secret fear that rules the breast.
At length arises one, whose voice
Is destined to decide their choice.
All hush'd, Lucidor has the word,
"My friends and brothers!" thus he's heard—

"A law there is, prescribed by heaven,
For ev'ry good to mortals given,
And this the precept all sublime:
That 'wanting wisdom's due control,
Even virtue's self becomes a crime—
The cup of bliss a poison'd bowl.'
All useful things may noxious be,
Sleep strengthens—sleep brings lethargy;
Meat feeds—meat brings obstruction after.
Ale warms—ale causes strangury;
Smiles cheer—convulsions come from laughter.
Nay, more—the mother virtue, whence
Arises earth's and heav'nly bliss,
The fear of God itself has this
(When overstretch'd) sad consequence,
Of voiding certain heads of sense.
And yet should any man from hence
Induce a Christian soul to think
'Twere wrong to sleep, eat, laugh, or drink;
He is, by giving such a rule,
A self-convicted knave—or fool.
As to what concerns the right
Administration of the light,
Wise rulers have two means of might:
Lashes, by which the over-bold
And negligent may be controll'd,
And engines, to allay the ire
Of the most infuriate fire."
He ceased—a general bravo cry—
A loud and general applause.
Save from the priest and company,
Who took their party prudently,
And mumbled curses 'twixt their jaws.
What happened on the southern side;
How quench'd they there the flame so fear'd,
Or what new palace there was rear'd
Above the former's fallen pride—
Of this we'll sing in future lays,
Should Heav'n vouchsafe us length of days.

(For the Zodiac.)

TRANSACTIONS OF THE ALBANY INSTITUTE—VOL. II. PART 2.

After an interval of nearly three years, we are happy to receive another number of the Transactions of this society. A notice on the cover informs us, of what unfortunately is too often an impediment with our few scientific and literary societies in this country, that the "inadequacy of the subscriptions to defray the expense of publication," has delayed the appearance of these Transactions. Time however, and the gradual influence of more enlightened views will, before long we trust, remedy these *minor* difficulties.

The present number contains two papers:

Art. 7. Report of the Committee appointed to continue Meteorological Observations.

Art. 8. Annual Address, delivered before the Institute, April 19, 1836, by Daniel D. Barnard, LL. D.

The first article owes its origin to the enlightened and extended views of the distinguished Sir John Herschel. This eminent man, in the possession of great wealth, at the head of European society, and blessed with an interesting family, has made himself a willing exile to the Cape of Good Hope, for the advancement of knowledge. One of his earliest undertakings after his arrival there, was the promulgation of a Report on Meteorology, a portion of which is extracted in the paper before us. The plan which he proposes is, that meteorologists in various parts of the world should make simultaneous observations on the state of the barometer and thermometer, the direction and force of the wind, the quantity, character, and distribution of the clouds, and every other particular of the weather, which might be deserving of notice. The times fixed upon for this purpose were, respectively, the 21st of March, the 21st of June, the 21st of September, and the 21st of December, "being those, or immediately adjoining to those of the equinoxes and solstices, in which the solar influence is either stationary, or in a state of most rapid variation."

In the present publication of the Albany Insti-

tute, are contained observations on the above plan, made at the following places:

22nd of June, 1835, at London, at the apartments of the Royal Society, by Mr. John D. Robertson, Assistant-Secretary Royal Society.

21st Sept. 1835, at London, as above.

21st Dec. 1835, at London, as above.

" at Albany, at the apartments of the Albany Institute, by a committee consisting of Matthew H. Webster, Philip Ten Eyck, John V. L. Pruyn and Horace B. Webster.
" at Montreal, by John S. McCord, Vice President of the Natural History Society, Montreal.

21st March, 1836, at London, as above.

" at Albany, as above.

" at Montreal, as above.

" at the Wesleyan University, Middletown, Connecticut, by Professor Smith.

" at the Institute, Flushing, Long-Island, by Professor Gill.

" at Cincinnati, Ohio, by Professor Locke.

An accumulation of observations of this description, and an application of them by men of the rank of Sir John Herschel, Arago, and their compeers, must improve ere long the neglected and obscure science of meteorology. The *utilitarian* should also cultivate it—it will yield *golden* returns.

Our limits will not permit us to do any sort of justice to Mr. Barnard's address. We shall offer a brief analysis of it in our next.

We are indebted to the Trustees of the Albany Female Academy for the following essay, by Miss ESTHER GIBBONS, of this city, to whom a gold medal was awarded at the recent examination.

MILTON.

Among the small but honored band of first rate poets none are more honored than John Milton. Milton was one of those splendid geniuses who give a character to their times. His great work, "The Paradise Lost," has long excited the admiration of men of learning, and of taste, and will continue to be read and admired, as long as the English language shall endure. A mighty mind, and high poetic feelings pervade every part. Every thing bespeaks that consciousness of great ability, which is inseparable from powers like his, and a conviction that every part of his subject was understood, was within the reach of his intellect. He insensibly communicates the elevation he feels himself, to his readers. One never fears in reading Milton for the writer. We seem to place implicit confidence in the powers of his mind, and the thought that he should ever fail, seems never once to disturb us. "He chose for his theme," as Dr. Johnson observes, "a subject on which too much could not be said, on which he might tire his fancy without the censure of extravagance." And he has treated it with a force, a novelty, a talent, which have prevented any from attempting to claim the rivalry with him. He exhibits in this work a vastness of thought, a grandeur of intellect, which command and fill the mind, and at the same time a discretion that never oversteps the bounds of prudence. Nothing in this astonishing work is pushed beyond its proper limits, nothing is weak, a rich vein of fancy, a masculine spirit runs throughout the whole. The powers of his imagination are unrivalled. There is no meagreness in his fancy, no poverty in

his details. He delineates character after character, and calls up shape after shape, in endless progression. He lets loose the demons of hell upon us, and unbars the blazing gates of heaven. At the wave of his wand, sin and death appear, and vengeance follows them, "wing'd with red lightning and impetuous rage." He is as beautiful as he is sublime. He shows our first parents breathing the fragrant air of Eden, holding communion with angelic spirits, and feeding on nectareous fruits, in the midst of its Elysian scenes. These qualities of the sublime and beautiful so happily blended, render him at once, terrible, and attractive. His diction is of the most magnificent and glowing character. It has all the rich and varied sweetness of Homer, the simplicity of Virgil, and harmony of Pope, united to a vigor and sublimity peculiarly his own. There are no superfluous ornaments, no overstrained touches to destroy the effect of the poetry, and mar the beauty of the composition. All is simple, free, and unrestrained. Besides it is wonderfully adapted to his theme, and he could vary it, to suit the strength or gentleness of the subject. It was at times elevated and rapid, and then smoothly flowing in softened cadences on the ear. Now it is a torrent, dashing along its rocky course, rejoicing in its might, and now a sweetly flowing river, without a ripple to disturb the serenity of its waters. And there is a fascination about it which captivates, a magic that sends the blood thrilling to the heart.

The most striking characteristic of the poetry of Milton, is the extreme remoteness of the association by which it acts upon the mind. It produces its effects more by what it suggests than by what it expresses. He cannot be enjoyed unless the imagination of the reader keeps pace with his own, to fill up the bold outline that he sketches. "His poetry acts like an incantation." Its beauty lies in its occult power. His words seem to assimilate the past, the present, and the future. Let the least change be made in the order or structure of his sentences, and the whole effect is destroyed, the vision vanishes.

Milton's great and distinguishing excellence, is his sublimity. He seems to have been familiar in a region where every thing was grand and elevated, and his mind was constantly imbibing a sympathetic influence. His grandeur fixes us in a state of amazement and elevation, till we feel ourselves raised above the narrow bounds of earth, and connected with beings of higher orders of intelligence. The powers of his mind in this respect are stupendous, and are constantly exhibiting themselves, they burst forth like torrents, and sweep every barrier before them. The first, second and fifth books are but continuous examples of his power in raising emotions of the sublime and elevated. The grandeur of his images, and felicity of his expressions, are beautifully exhibited in his description of Satan, at the head of his infernal hosts:

"He, above the rest

In shape and gesture proudly eminent,
Stood like a tower: his form had not yet lost
All her original brightness, nor appear'd
Less than arch-angel ruin'd, and the excess
Of glory obscur'd: as when the sun, new risen,
Looks through the horizontal misty air,
Shorn of his beams: or from behind the moon,
In dim eclipse, disastrous twilight sheds
On half the nations, and with fear of change
Perplexes monarchs. Darken'd so, yet shone
Above them all th' arch-angel."

How many sources of the sublime are here com-

bined, forming one glorious whole. Principally shines the arch-angel, that great but fallen spirit, who, in his fall, drew after him the third part of heaven's hosts. How is our admiration of his grandeur, and of his fall increased, by comparing him with the sun eclipsed in his meridian splendour, casting darkness over half the nations. And yet what pity do we feel, as we see such excess of glory obscured, and obscured by so fell a cause, by ambition. Milton frequently heightens the effect of his descriptions, by clothing them with a gloomy, sepulchral grandeur. Of this the following is an instance:

"The other shape,

If shape it might be call'd, that shape had none,
Distinguishable in member, joint, or limb;
Or substance might be call'd that shadow seem'd;
For each seem'd either: black it stood as night,
Fierce as ten furies, terrible as Hell,
And shook a dreadful dart: what seem'd his head
The likeness of a kingly crown had on.
Satan was now at hand; and from his seat
The monster, moving onward, came as fast
With horrid strides: Hell trembled as he strode."

Milton has made use of all his mighty powers in delineating the character, the actions, and appearance of Satan, and well has he succeeded, for his is the most magnificent creation of poetry. He is essentially ideal. The universe is explored to make him peerless. In him, is united the fashion of an angel, the daring of a God, and all that can be conceived that is either grand, or terrible in nature. Every attribute is rugged and colossal. He is characterized by an insatiable thirst for power, the most unconquerable resolution, and the most enduring fortitude. His character, his actions, and his motives, are all sublime, all mighty and terrible. We look up to him in wonder and in dread, and detest and pity him, at the same time that we admire the power of the poet, who could sketch such a character.

But though Milton peculiarly excels all writers in his power over the sublime, yet he frequently furnishes us, with unexampled specimens of the beautiful and tender. How delightful are these softer strains of his lyre; how soothing to the mind; how refreshing to the soul; at times raising our passions; and then lulling and soothing them. As his soft strains blending into one another, rise clear and full upon the ear, a pleasing but pensive melancholy steals insensibly upon us. Scenes of joy and happiness long past, flash back upon our minds, with the vividness of reality, and we seem to live them o'er again. He also possesses the happy faculty of so mingling together the beautiful and sublime, as to form one transcendent picture. Such is his description of the angel:

"Six wings he wore to shade

His lineaments divine; the pair that clad
Each shoulder broad, came mantling o'er his breast
With regal ornament; the middle pair
Girt like a starry zone his waist, and round
Skirted his loins and thighs with downy gold
And colours dipt in Heav'n; the third his feet
Shadow'd from either heel with feather'd mail,
Sky-tinctur'd grain. Like Maia's son he stood,
And shook his plumes, that heav'nly fragrance fill'd
The circuit wide."

When the scene is laid in Paradise, every thing is pleasing and beautiful, the imagery is gay and smiling. Its still life, and calm scenes, are extremely refreshing after the turbulence, and wretchedness of the infernal regions. The meekness and purity of Adam and Eve, furnish a delightful contrast to the pride and ambition of Satan. We look with love and admiration on our great ancestors, wandering through the sequestered walks, and cool shades of Eden, joining in the minstrelsy of the

warblers of the garden, and holding sweet communion with angelic spirits. They lived happy in their innocence, their harmless pursuits, and the company of each other, knowing no evil, and suspecting none. Many is the useful lesson, and admonitory maxim, we may derive from their example. It can teach us where to seek for true happiness, and how to avoid temptation. Among the exquisite pictures with which this part of the poem abounds, is the portrait of Eve, possessed of more than mortal loveliness, innocent, and gentle, she stands before us, the first of womanhood. "Grace was in all her steps; Heaven in her eye. In every gesture dignity and love." Milton's power over the pathetic, is shewn in the hapless fall, our sympathies are here called strongly into action. Placed in the midst of matchless beauty and happiness, they were happy; but the interval was short; the bright prospect is soon overclouded. The Serpent succeeds in corrupting the faith of our first parents, and sin and death, leaving the portals of the lower world, follow in his footsteps, to the abodes of peace and joy, to make it their home, their place of refuge. With eyes moistened with sympathetic tears, we follow the now miserable pair, leaving the gate of their beloved Eden, and passing down into "the subjected plain." The picture is soft and affecting, and causes us while we acknowledge the merit of their punishment, to bewail its effects.

Our admiration for the *Paradise Lost*, will be enhanced by considering, that this work was undertaken when all the high hopes, and bright prospects, of Milton's opening life were blighted. When defeat had attended his noble struggle for the liberties and happiness of England, and age had settled upon him. But none of these afflictions could break that spirit, chill that imagination, nor cool that heart. The strength of his mind overcame every calamity. Under the heavy pressure of all these afflictions, united with those of ill-health and blindness, and obliged to seek shelter from the mad fury of his enemies in obscurity; he prepared and presented to the world his *Paradise Lost*, the most imaginative, the most perfect of earth's poetry, adorned with all that is most holy, most enchanting in creation. To be convinced of the superior excellence of Milton, we need only place the *Paradise Lost* by the side of the ephemeral productions of the day, that are so loudly applauded, and compare their dull monotony and insipid thought, with the life, the beauty, and the sublimity which are its peculiar characteristics. It is when we thus attempt a comparison, that we are forced to acknowledge his superiority, to admit that he soars as high above them, as the Imperial Eagle above other birds. There is a living reality about him, that cannot fail to strike the most casual observer, his characters are all embodied, we share in every every passion that they feel, sympathise in all their sufferings, all their joys, in their successes, and their defeats, for we feel that they are living beings acting their appropriate parts.

It is the peculiar power of Milton "to raise the genius and to mend the heart," lead the spirit captive, and blend, as it were, the soul of his readers with his own. It is an affair of the heart, as well as of the head, a unity of the impulses of taste with the power of reason. The brilliancy of his fancy, the elegance of his taste, his minute acquaintance with, and unbounded influence over the deep, varied feelings of the soul, and the vigor of his intellect, entitle him to the rank he holds, as the greatest poet of either the ancient or modern world.

METEOROLOGICAL TABLE FOR JULY, 1836, KEPT AT THE ALBANY ACADEMY.

| Days Mo. | MORNING. | | | EVENING. | | | THERMOMETER. | | | | WINDS. | | | WEATHER. | | Rain Gage. | REMARKS. |
|----------|----------|----------------|------------|----------|----------------|------------|--------------|--------|--------|-------|--------|-------|---------|----------|----------|------------|---------------------------|
| | Barom. | Attach. Therm. | Dew Point. | Barom. | Attach. Therm. | Dew Point. | 6 A.M. | 3 P.M. | 9 P.M. | Mean. | 8 A.M. | Noon. | 10 P.M. | Morning. | Evening. | | |
| 1 | 30.09 | 70.50 | 67.5 | 30.02 | 76.50 | 72.5 | 66 | 87 | 76 | 77.00 | W | NW | NW | Cloudy. | Clear. | | |
| 2 | 30.075 | 73. | 72. | 30.02 | 78. | 75. | 70 | 83 | 75 | 76.00 | SE | S | S | Clear. | Cloudy. | | |
| 3 | 30.11 | 74.75 | 70. | 30.05 | 78.25 | 70. | 70 | 86 | 72 | 76.00 | S | S | S | do | Clear. | | |
| 4 | 30.03 | 72.25 | 69. | 29.97 | 75. | 73. | 70 | 76 | 72 | 72.56 | S | S | S | Cloudy. | Cloudy. | 0.61 | Rain. |
| 5 | 30.06 | 75.25 | 70. | 29.95 | 77. | 70. | 69 | 82 | 74 | 75.17 | S | NW | S | do | do | 0.13 | Shower 1 P. M. |
| 6 | 30.035 | 75.50 | 63. | 29.95 | 76.25 | 70. | 70 | 77 | 71 | 72.67 | W | W | S | Clear. | do | | |
| 7 | 30.07 | 77. | 70. | 30.085 | 81.25 | 74. | 70 | 93 | 82 | 82.17 | SE | W | W | do | Clear. | | |
| 8 | 30.095 | 79. | 71. | 29.97 | 84. | 77. | 73 | 93 | 84 | 83.83 | W | S | S | do | do | | |
| 9 | 29.97 | 81.75 | 76. | 29.85 | 83. | 76. | 76 | 88 | 81 | 80.33 | S | S | S | do | Cloudy. | 0.45 | Night of 9th and 10th |
| 10 | 30.04 | 74. | 65. | 30.04 | 78. | 64. | 68 | 81 | 66 | 70.17 | NW | NW | NW | Cloudy. | Clear. | | |
| 11 | 30.165 | 73. | 58. | 30.125 | 77. | 68. | 59 | 79 | 72 | 70.83 | N | N | NW | Clear. | do | | |
| 12 | 30.12 | 76.50 | 66. | 30.06 | 79.50 | 70. | 64 | 84 | 76 | 76.33 | NW | E | SE | do | do | | |
| 13 | 30.04 | 76. | 70. | 30.00 | 79.50 | 70. | 74 | 90 | 80 | 81.17 | S | S | S | do | do | | |
| 14 | 30.03 | 75.75 | 74. | 30.05 | 73.25 | 66. | 73 | 70 | 65 | 67.67 | S | NNE | NNE | Cloudy. | Cloudy. | | |
| 15 | 30.15 | 72.50 | 59. | 30.16 | 75.50 | 62. | 63 | 81 | 67 | 70.33 | NE | N | N | Clear. | Clear. | | |
| 16 | 30.80 | 72.25 | 57. | 30.24 | 74.25 | 50. | 63 | 81 | 68 | 69.83 | N | NE | N | do | do | | Aurora 9 P. M. |
| 17 | 30.32 | 70. | 54. | 30.255 | 73. | 50. | 58 | 77 | 60 | 64.17 | N | NNE | NE | do | do | | |
| 18 | 30.40 | 68. | 60. | 30.32 | 74. | 54. | 53 | 82 | 67 | 69.67 | NNE | N | NE | do | do | | |
| 19 | 30.285 | 71. | 60. | 30.13 | 75.50 | 54. | 67 | 87 | 72 | 75.67 | SSW | W | W | do | do | | |
| 20 | 29.98 | 71. | 64. | 29.87 | 78. | 64. | 69 | 86 | 74 | 76.67 | W | NW | NW | Cloudy. | do | | |
| 21 | 29.76 | 73.50 | 68. | 29.61 | 70.50 | 68.50 | 71 | 72 | 67 | 68.17 | SW | SW | W | do | Cloudy. | 0.52 | Rain. |
| 22 | 29.775 | 68. | 55. | 29.84 | 71.50 | 48. | 60 | 74 | 63 | 65.00 | NE | NE | NE | Clear. | Clear. | | |
| 23 | 30.02 | 66. | 56. | 30.00 | 72.25 | 58. | 56 | 83 | 70 | 70.83 | NE | S | S | do | do | | Aurora 11 P. M. |
| 24 | 29.91 | 66. | 61. | 29.97 | 70. | 69.50 | 63 | 70 | 69 | 67.33 | S | S | S | Cloudy. | Cloudy. | 0.41 | Rain. |
| 25 | 30.07 | 70. | 62. | 30.065 | 72. | 60. | 63 | 78 | 67 | 68.67 | N | N | N | Clear. | Clear. | | |
| 26 | 30.04 | 69. | 58. | 30.035 | 70.75 | 54. | 59 | 76 | 64 | 66.50 | NNE | N | NW | do | do | | |
| 27 | 30.18 | 68. | 53. | 30.13 | 69. | 51. | 60 | 74 | 65 | 66.00 | N | N | NE | do | do | | |
| 28 | 30.11 | 67. | 61. | 30.03 | 72.25 | 63. | 58 | 81 | 70 | 71.50 | E | S | S | do | do | | |
| 29 | 29.95 | 68. | 66. | 29.805 | 69. | 64. | 69 | 75 | 66 | 70.00 | S | S | S | Cloudy. | Cloudy. | 0.31 | Rain. |
| 30 | 29.775 | 71. | 68. | 29.85 | 73.25 | 60. | 69 | 75 | 67 | 69.17 | S | NW | NW | do | Clear. | | |
| 31 | 30.06 | 70. | 68. | 30.02 | 74.25 | 66. | 62 | 80 | 74 | 73.00 | W | SW | SSW | Clear. | do | | Brilliant aurora 10 P. M. |

RESULTS.

External Thermometer.

Mean of first half of the month,..... 75°47
Mean of second half of the month,..... 69.51
Mean of the whole month,..... 72.49
Fair days 21½; Cloudy 9½; rain on 6 days.
Rain Gage, 2 inches and 43-100ths.
Highest deg. 93; lowest 53.

Winds.—North 4½ days; north-east 4½; east ½;
south-east 1; south 10½; south-west 1½; west 3½;
north-west 4½. Prevailing wind, south.

Warmest day, 8th; coldest day, 17th.

Mean of Barometer, corrected for Capillarity,
and reduced to 32°.

Morning,..... 30.006 inches.
Noon,..... 29.992 do.
3 P. M..... 29.958 do.
Evening,..... 29.946 do.
Maximum,..... 30.40 do.
Minimum,..... 29.61 do.
Monthly range,..... 0.79 do.

Dew Point.

Mean in morning,..... 64° 06
Mean in evening,..... 64° 22
Mean force of vapor, 0.636 inches.
Mean deg. of dryness, 10°99 thermometric scale.
do. moisture, 702. nat. scale Hygrom.
Least degree of moisture observed, 457.
Amount of evaporation,..... 8.370 inches.
Weight of Vapor in a cubic foot.
Mean,..... 7.009 grains.
Maximum,..... 10.250 do.
Minimum,..... 4.081 do.

THE VIOLET.

FROM THE FRENCH OF M. DUROS.

Daughter of Spring, whose purple flower
Loves best to hide from every eye
In deepest shade t'inhale the shower,
Unseen to bloom—unseen to die:

Like the kind hand which succour lends
To him who seeks a home in vain,
Yet blushes at the thanks he sends,
And hears his grateful wish with pain.

Why dost thou not thy flower display,
Whose odours are so doubly sweet—
Show thy soft beauties to the day,
The homage of a world to meet.

Perhaps the beauty of the Rose
By some may be preferred to thine;
Fear not—the hour of evening's close
Is dearer than the day's broad shine:—

Less beautiful perchance thou art,
Yet dear to friendship thou shalt be;
Love's brightest Roses wound the heart,
But thou from envious thorns art free.
Come, quit this lone and quiet dell,
And in my garden thou shalt bloom—
There, in its calm retreat shall dwell,
And cheer me with thy soft perfume.

Yet no—to grace the lonely wood
Still here remain—how happy he
Who spends his life in doing good,
Yet hides himself from praise like thee.

SONG.

FROM THE GERMAN OF GOETHE.

I think of thee, when o'er the deep
The sun has shed its brightest ray:
On thee I often think and weep
When on its waves the moon-beams play.

I hear thee, when the billows rise
With gentle murmurs of mine ear;
When lowering clouds have veiled the skies
In forests dark thy step I hear.

I see thee, in the depth of night,
From me thou never can'st be far;
I see thee in that paler light
Which beams from every trembling star.

ON THE STATUE OF AN OX,
FROM THE ANTHOLOGY.

So wondrous Myron's art is shown,
That by the gods, we vow,
The statue harness wants alone,
To quit its base and plough.

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